

Sequence Listing

SEQ ID No 1

5 GTTCGACGTCATTGCCACGTTTCGACCCAAGGGCAGACGCCATGTGCGCGAGCGATCGCCGCGATATGCCTCGAATTT
GCGCCATTGCGGCATCCAGTTTCCAGTGCCCTTCCCCGAATGACTGTCTCCACTATTTCGGCAAGATTGTAAATCAAGCC
TGAAGAAGCGGAGCAATTCCTTGGAGTCGTATGTTCTACTGATTTCTGTGCCTGGCGCAGACGGGTATATAAATAAAG
ATCACCGCACCGAGGAGTTTCTTACCAACCCATCAATAACCATCCACAATCTCCTACAACAAAAATGACTGTGCGCCGA
TATCGACGTTCTCCTGCGGAGGGCATCCCTACTTCACTCCGGCCCGAGAACCCTCCTGCGCGTACGGCAGCTAACCC
10 CCAGACCAATGGCCAGAAGATCCCCAAGCTCTTCACGCCCTTGACCATCCGTGGCGTCACCTTCCAGAACCGCCTTGG
TGTAAGTCCGTTTGCCCTTGCTCATATCGACGAAAGCTAATCCCCCGTCAGCTCGCGCCCCCTCTGCCAATACTCCGCC
CAGGACGGCCACATGACCGACTACCACATCGCCCATCTGGGTGGGATCGCCCAACGCGGACCCGGCCTGATGCTGATT
GAGGCGACCGCCGTCAGCCCGAAGGCCGCATCACCCCTCAGGATGTGCGTCTGTGGAAGGACTCCCAGATCGCCCCG
ATGCGCCGGTTCATCGACTTCGTGCACAGCCAGGGCCAGAAGATCGGCGTGCAGCTTGCCCATGCCGGCCGGAAGCC
ACCACCGTTGCGCCCTGGATCTCATTTCTCGGCCATCGCGACGGAGAAGTTCGGCGGATGGCCGGACCGCGTCAAAGGG
15 CCCGGCGATATCCCCTTTGCGGAGCCCTTCGCCAAGCCCCAAGGCCATGACGCTGGATGAGATCGAGCAGTTCAAGAAG
CCTGGGTGGCGGCCACGAAGCGCGCCATCGCGCCGGTGCGGACTTTGTGAGATTCACAATGCGCATGGATACCTG
CTGTGCTCATTCCTCTCGCCGGCCCAACAACCGCACGGACAGTACGGCGGGTTCGTTGAGAACCAGCATCCGGCTG
TCTCTCGAGATTGCGCAGTTGACTCGGGACGCCGTGCGCCCTCATGTGCCCGTTTTCCTGCGCATTTTCGGCCTCGGAC
TGGTGCGAGGAGACCCTGCCGGAGCAGAGCTGGAAGTCGGAGGATACCGTTCGGTTTCGCGCAGGAGCTGGTCAAGCAG
20 GCGCCGTTGATCTGATCGATATCAGCAGCGGTGGTGTCTCGCGCAGCAGAAGATCAAGTCCGGCCCTGCCTTCCAG
GTGCCTTTTGCCGTGGCCGTGAAGAAGGCCGTGCGCGACAAGCTGCTGGTTGCCCGCGTGGGTGCCATACCAACGGC
AAGCAGGCGAATCAGATTCTAGAGGAGCAGGATATCGAGTTGCGCTGGTTGGCCGTGGGTTCAGAAAGGATCCCGGT
CTGGCCTGGACGTTTGCTCAGCACCTCGGCGTCGAAATCTCCATGGCCAACAGATCCGCTGGGGCTTACCCCGCGT
GGAGGCACCCCGTACATTGATCCTTCGGTGTACAAGCAGTCTATTTTCGATGTATAGAGTATAGATAGAGTTGAAGAT
25 GATACCTCATAGACGATCAATGGACCTTGACATTTATTTCTCGTCTCCTGCGTATGTTCAAGGTATTCACAGTAGCT
GCGTCTCTTAAGTTTCTCCGTCAATCGTTCTATTCTACTCCAATCGCAACGCATGGCGACCACGGATCGAGTCGAAT
TTCTCCGTGCTTCGTATCTGATCAATATAAAAGCGGGGAATGGCTTGACCCCGCGCAGAATGTGATCTCTTCGCAA
ACTCTCGGTGTATAGGACGCTCAGCAACGATCAAGG

30

SEQ ID No 2

GTATGTTCTACTGATTTCTGTGCCTGGCGCAGACGGGTATATAAATAAAGATCACCGCACCGAGGAGTTTCTTACCAA
CCCATCAATAACCATCCACAATCTCCTACAACAAAAATGACTGTGCGCGATATCGACGTTTCCTCCTGCCGAGGGCATC
CCCTACTTCACTCCGGCCCGAGAACCCTCCTGCGGTACGGCAGCTAACCCCCAGACCAATGGCCAGAAGATCCCCAAG
35 CTCTTACGCCCTTGACCATCCGTGGCGTCACCTTCCAGAACCGCCTTGGTCTCGCGCCCTCTGCCAATACTCCGCC
CAGGACGGCCACATGACCGACTACCACATCGCCCATCTGGGTGGGATCGCCCAACGCGGACCCGGCCTGATGCTGATT
GAGGCGACCGCCGTCAGCCCGAAGGCCGCATCACCCCTCAGGATGTGCGTCTGTGGAAGGACTCCCAGATCGCCCCG
ATGCGCCGGTTCATCGACTTCGTGCACAGCCAGGGCCAGAAGATCGGCGTGCAGCTTGCCCATGCCGGCCGGAAGCC
ACCACCGTTGCGCCCTGGATCTCATTTCTCGGCCATCGCGACGGAGAAGTTCGGCGGATGGCCGGACCCGCGTCAAAGG
40 GCGCGCGATATCCCCTTTGCGGAGCCCTTCGCCAAGCCCCAAGGCCATGACGCTGGATGAGATCGAGCAGTTCAAGAA
GGACTGGGTGGCGGCCACGAAGCGCGCCATCGCCCGCCGTGCGGACTTTGTGAGATTCACAATGCGCATGGATACCT
GCTGTGCTCATTCCTCTCGCCGGCCGCCAACAACCGCACGGACAGTACGGCGGGTTCGTTGAGAACCAGCATCCGGCT
GTCTCTCGAGATTGCGCAGTTGACTCGGGACGCCGTGCGCCCTCATGTGCCCGTTTTCCTGCGCATTTCCGGCCTCGGA
CTGGTGCGAGGAGACCCTGCCGGAGCAGAGCTGGAAGTCGGAGGATACCGTTCGGTTTCGCGCAGGAGCTGGTCAAGCA
45 GGGCGCCGTTGATCTGATCGATATCAGCAGCGGTGGTGTCTCGCGCAGCAGAAGATCAAGTCCGGCCCTGCCTTCCA
GGTGCCTTTTGCGGTGGCCGTGAAGAAGGCCGTGCGCGACAAGCTGCTGGTTGCCCGCGTGGGTGCCATACCAACGG
CAAGCAGGCGAATCAGATTCTAGAGGAGCAGGATATCGACGTTGCGCTGGTTGGCCGTGGGTTCAGAAAGGATCCCGG
TCTGGCCTGGACGTTTGCTCAGCACCTCGGCGTCGAAATCTCCATGGCCAACAGATCCGCTGGGGCTTACCCGGCG
TGGAGGCACCCCGTACATTGATCCTTCGGTGTACAAGCAGTCTATTTTCGATGTATAGAGTATAGATAGAGTTGAAGA
50 TGATACCTCATAGACGATCAATGGACCCTTGCATATTATTT

SEQ ID No 3

55 MTVADIDVPPAEGIPYFTPAQNPPAGTAANPQTNGQKIPKLFPTLTIRGVTFQNLGLAPLCQYSAQDGHMTDYHIAH
LGGIAQRGPGMLLIEATAVQPEGRITPQDVGLWKDSQIAPMRRVIDFVHSQGQKIGVQLAHAGRKATTVPWISFSAI
ATEKVGGWPDVRKGPDIIPFAEPFAKPKAMTLDIEQFKKDWWAATKRAIAAGADFEIHNHAGYLLSSFLSPAANNR
TDQYGGSFENRIRLSLEIAQLTRDAVGPHVPVFLRISASDWCEETLPEQSWKSEDTVRFAQELVKQGAVDLIDISSGG

VLAQQKIKSGPAFQVPFAVAVKKAVGDKLLVAAVGATTNGKQANQILEEQDIDVALVGRGFQKDPGLAWTFAQHLGVE
ISMANQIRWGFTRRGTPYIDPSVYKQSFIDV

SEQ ID No 4

5 atgtcgcaacctgttgtgcctgacatcgagaacaaacccgcgcgggtatctcgtactttactccggcgcaagagccg
cctgctggcaccgctgctaattcctcagtcctgatggatcggaacctcccaagctcttcggcgctttcgggtgcggggt
ctgacctttcaccaatcgcatgtggcgtgagtgagtcaggcaattatgctatccatcctatgagagcccttgcatgg
aacagccgcttacaggggaatgataatgagtagctatcgccactctgccaatactcagccgacgatggacacatgactc
cctggcatatggcacatcttggagggttgcccagcgaggccaggattcttgatggtcgaggcaacagcagtcgaac
10 cgggaaggcaggatcaccccgaggacctgggactatggaaagactcgcagattgagccattgagccgctgacgagtc
ttgtccacagtcagaaccagcttatcggcgtgcagatcgacacgcaggtcgcaaggccagcacccgtcgccgatggc
tctcggccaacgataaccgctccgagaagatggcggtggccaggccgctcaaaggcccgacaaatgtgcccttca
ccgttaagaacctgtgcccgaaggagatgaccaagcaggatatacgaggatctgaagaccgcctgggtggccgctgtca
aacgggctgttaaggccggagccgactttatcgagatccacaatgcgcatggctatcttctgatgtcgttctctccc
15 ctgcggtcaacacgagaacagacgagtagcggaggcagttttgagaatcgcatccggctcagtcctggagatcgccaagc
tcaccgcgaaaaatgtgcccgaaggatagcctgtcttctcgtgggtctccgccaccgattggctggaggaggtgcagc
cgaacaagcccgactgtggcgaggcgtggacactgtccgattttgcaagatcctggcagaaacgggttacgttgacgtgc
ttgacgtgagcagtggtggcgcactcattcgagcagcatatccacgcgaagccaggcttcaggccaccctttgctattg
ccgtcaagaacgcgctcggggacaaactcgagtggtcagtcagtggtatgattgccagcgcgcatttggccaattcct
20 tgttggaaggacggactggaccttgtgctggttgacgtggcttccagaagaacccggggctggtgtggcggtggg
ccgacgagctgaatgtagagatctccatggctaatacagatccgatgggggttctcggcgcgcggtgctgtgcttacc
tcaggaagaaactcgagaagatataa

SEQ ID No 5

25 ATGTGCGCAACCTGTTGTGCGCTGACATCGAGAACAAACCCGCGCGGGGTATCTCGTACTTTACTCCGGCGCAAGAGCCG
CCTGCTGGCACCCTGCTAATCCTCAGTCTGATGGATCGGCACCTCCCAAGCTCTTCCGGCCGCTTTCCGTGCGGGGT
CTGACCTTTACCAATCGCATTGGCCTATCGCCACTCTGCCAATACTCAGCCGACGATGGACACATGACTCCCTGGCAT
ATGGCACATCTTGGAGGGATTGCCCAGCGAGGGCCAGGATTCTTGATGGTCGAGGCAACAGCAGTCGAACCGGAAGGC
AGGATCACCCCGCAGGACCTGGGACTATGGAAGACTCGCAGATTGAGCCATTGAGCCGCGTGATCGAGTTTGTCCAC
30 AGTCAGAACCAGCTTATCGGCGTGAGATCGCACACGCAGGTGCAAGGCCAGCACCGTCGCGCCATGGCTCTCGGCC
AACGATACCGCCTCCGAGAAGATGGGCGGCTGGCCAGGCCGCGTCAAAGGCCCGACAAATGTGCCCTTACCCGTTAAG
AACCCTGTGCCGAAGGAGATGACCAAGCAGGATATCGAGGATCTGAAGACCGCTGGGTGGCCGCTGTCAAACGGGCT
GTTAAGGCCGGAGCCGACTTTATCGAGATCCACAATGCGCATGGCTATCTTCTGATGTGCTTCTCTCCCTGCGGTC
AACACGAGAACAGACGAGTACGGAGGCACTTTTGAGAATCGCATCCGGCTCAGTCTGGAGATCGCCAAGCTCACCCGC
35 GAAAATGTGCCCAAGGATATGCCTGTCTTCTGCGGGTCTCCGCCACCGATTGGCTGGAGGAGGTGCAGCCGAACAAG
CCCAGCTGGCGAGGCGTGGACACTGTCCGATTTCGAAGATCCTGGCAGAAACGGGTTACGTTGACGTGCTTGACGTG
AGCAGTGGCGGCACCTATTCCGAGCAGCATATCCACGCAAGCCAGGCTTCCAGGCACCCCTTTGCTATTGCCGTCAAG
AACGCCGTGCGGGACAACTCGCAGTGGCATCAGTGGGTATGATTGCCAGCGCGCATTTGGCCAATTCCTTGTGGAG
AAGGACGGAAGTGGACCTTGTGCTGGTGGACGTGGCTTCCAGAAGAACC CGGGGCTGGTGTGGGCGTGGGCGGACGAG
40 CTGAATGTAGAGATCTCCATGGCTAATCAGATCCGATGGGGTTTCTCGCGCGCGGTGCTGGTCTTACCTCAGGAAG
AAACTCGAGAAGATATAA

SEQ ID No 6

MSQPVVPDIENKPAPGISYFTPAQEPPAGTAANPQSDGSAPPKLFRLPSVRGLTFHNRIGLSPLCQYSADDGHMTPWH
45 MAHLGGIAQRGPGFLMVEATAVEPEGRITPQDLGLWKDSQIEPLSRVIEFVHSQNQLIGVQIAHAGRKASTVAPWLSA
NDTASEKMGWPGRVKGPNTNVPFTVKNPVPKEMTKQDIEDLKTAWVAAVKRAVKAGADFIEIHNAHYLLMSFLSPAV
NTRTDEYGGSFENRIRLSLEIAKLTRBNVPKMPVFLRVSATDWLEEVQPNKPSWRGVDTVRFAKILAEITYVDVLDV
SSGGTHSEQHIHAKPGFQAPFAIAVKNVAVGDKLAVASVGMIAASHLANSLLKEDGLDLVLVGRGFQKNPGLVWAWADE
50 LNVEISMANQIRWGFSTRRGAGPYLRKKLEKI

SEQ ID No 7

ATGGGTTCCAACGCCTTCCGGTCCCCCGCGTCACCAAGTCCTCCTCCACCCCTACTACACTCCCGCCAACAATGGA
GGCGCCGCCCTGCACCCCGACGACCCACGACCCCTACGCTCTTCCGGCCCTTACAAATCCGCAATGTGACGCTCAAG
AACC GCATCATGGTGTGCGCCATGTGCATGTACTCCTCGAGTCGGACCCGTCGTCCTCCACGTCGGCGCCCTAACA
55 AACTACCACTGGCGCATCTGGGCCACTCGCCCTCAAAGGCGCAGGCCTCGTCTTCATCGAAGCCACCGCCGTGCAG
CCCCAACGGGCGCATCTCCCCAACGACTCGGGCCTCTGGCAGGACGGCACCACTCGGAACAATTCCTGGGGCTGAAG
CGGGTCGTTCGAGTTCATTCACGCACAGGGCGCCAAAGTCGGGATCCAGCTTGCGCATGCGGGCCGGAAGCGAGTGCC
GTTGCGCCGTGGCTGGCGGCGCAGGCGGGCAAGTCGAGTCTGAAGGCGGATGAGAGCGTTGGCGGGTGGCCCGCGGAT
GTGGTGGGTCCGTGCGGCGGGGAGGAGCATATCTTTAGTCCCGAGGAGGATGCGTATTGGGTGCCGCGGGCGCTGAGC
60 ACGGCCGAGGTCCGTGAGGTGGTGGCGGCGTTTTCGAAGAGCGCGCGGCTAGCGGTGCAGGCTGGGGTGGATGTTATC

MGSNFRSPAVTKSSSTPY YTPANNGGAALHPDDPTTPTLFRPLQIRNVT LKNRIMVSPCMYSCSDPSSPHVGALT
 NYHLAHLGHLALKGAGLVFTEATAVQPNGRISPND SGLWQDGT TSEQFLGLKRVVEFMHAQGAQVGIQLAHAGRKASA
 VAPWLAAQAGKSSSLKADES VGGWPADV VGPSGGEHIF SPEEDAYWVPRALSTAEVRQVVA AFKASARLAVQAGVDVI
 EIHGAHYLINEFLSPVNTKR TDAYGGSFENRTRIVREVAAAIRIVIEGMPFLFRISATEWLEGQFVAAESGSWDMQ
 SSLELVKKLP EWGIDLVDS SAANHDKQKINLHTAYQTDLAGQIRQAI RAAGASTLVGAVGLITDSEQARGLVQGADE
 ATAAEAMLSGPEPKADAILARQFLREPEWVFSTARKLGPVPTVPVQFGRAI

ATGGCTCTCCCTGACGTCGAAAAACACCCCCGCCGCCGGCATCCCCTACTTTACACCAGCACAGAACCCCTCCTGCTGGA
ACAGCTGCCAACC CGCAAACCAGCGGCAATGCCGTCCCCAAGCTGTACACACCTCTGACGGTGCGTGGGGTGACCTTC
CACAAACAGACTTTGGCCTCGCGCCGCTCTGCCAGTACTCCGCAGAAGACGGCCACATGACAGACTACCACATCGCGCAC
TTGGGAGGTATTTGCCAGCGCGGCCCGGTCTCATGATGATCGAGGCAACCTCCGTCTCACCTGAAGGCAGAAATCAG
CCGCAGGACGTGCGTTTATGGAAGGATCGCAGATGCGCCCATGAAGCGCGCTCATCGACTCTGTGCACTCGCAGTCC
CAGAAGATTGGCGTGACGATTGCCACGCCCGGCCGAAGGCTTCGAACATCGCCCCCTGGCTCATGAACAAGGGCATC
GTCGCGACGGAGAAGGTGCGTGGCTGGCCGGATCGTGTGATCGGCCCGTCCACCGTGCCCTCCACGAGACTTTCCCC
ACCCCCAAGGCCATGACCAAGGACGACATCGAGCAGTTCAAGCGCGACTGGTTTGATGCGTGCAAGCGGGCCATTGCC
GCTGGCGCGGACTTCATCGAGATCCACAATGCCACCGGGTATCTTCTCTCGTCTTTCCCTATCAGCGTCTTCCACACG
CGCACCCAGCAGTACCGCGGCTCCTTTGAGAACCAGCATCCGGTCTCTCTCGAAATCGCCGACCTACCCGTCAGCGC
TCGGGCCCCAACGTTCCGCTTTTTTCTCCGTGTCCTCGCGCAGCGACTGGATCGAGGAGACCCTCCCCGAGGAATCGTGG
AAGCTCTCTGACTCCGTCCGCTTCGCCGAAGCCCTCGCTGCCCAGGGCGCTATTGACCTGATCGACGTCTCTTCCGGC
GGTGTCCACGCCCGCGCAGAAGATCAAGTCCGGGCCGGCTTTCCAGGCTCCCTTCGCTGTGGCTATCAAGAAGGCCGTT
GGCGATAAGCTCCTTGTTGCGACGGTGGGCACGATCACGAACGGTAAGCAGGCGAACAAGCTGCTTGAGGAGGAGGGA
TTGGATGTTGCGCTTGTTGGGACGTGGTTTCCAGAAGGATCCCGGTCTGGCGTGGACTTTCGCGCAGCATCTTGATGTT
GAGGATTCGATGCGTGATTCAGATTCCGTTGGGATTACAAAGGCGCGGGGACGCCTTATATCGACCCCCAAGCTTAT
AAGGATGAGCATCTTTGAGTAA

MALP
PDVENT
PAAGI
PYFT
PAQN
PPAG
TAAN
PQTS
GNAV
PKLY
TPLT
VRGV
TFHN
RLGL
APLC
QYSA
EDGH
MTDY
HIAH
LGGI
AQRG
PGLM
MIEA
TSVS
PEGR
ITPD
VGLW
KDSQ
IAPM
KRVI
DFVH
VSQS
QKIG
VQIA
HAGR
KASN
IAPW
LMNK
GIV
VATE
KVGW
PDRV
IGPS
TVPF
HET
FTPT
PKAM
TKDD
IEQF
KRDW
FDACK
RAIA
AAGAD
FIEI
HNAH
GYLL
SSFL
SPSS
NT
RTDE
YGGF
FENR
IRLS
LEIA
QVTR
DAVG
PNVP
FLRV
SATD
WIEE
TLPE
ESWK
LSDS
VRF
AEAL
AAQG
AIDL
IDVSS
GVHAA
QKIK
SGPA
FQAF
AVAI
KAVG
DKLL
VATV
ITNG
KANK
LLEE
GLDV
ALV
VGRG
FQKD
PGLA
WTFA
QHLD
V
EIAM
SQRW
GFTT
RRGG
TTPY
IDPK
AYKE
SIFE

ATGACAGTTCATACCAAGTAAAACCATCAGATGAAATCAAAGGTGCTCCTGAGGTTTCCTATTACACTCCAGAACAG
CCTGTTCCGGCTGGTACTTTTTATCCCCAATCGTCAGATGAAGTTGCTCCCAAATTTTTCAACCTTTAAAGATTGGT
AAGCTTGCTTGGCCAAACAGAATTGGGGGTATCTCCAATGTGTCAATATTCTGCTGATTATAAATTTGAAGCAACTCCA
TACCATTTAATCCATTATGGTTCTATTAGTGAATCTGGGGCCAGGTATCACCATTGTGAAGACCGGCTGTTCTCTCT
GAGGTTGGATTATCACCTCATGATTTAGGAATCTGGAAGGATGAACAAGCAGAGAAATGAAACCAATTGTCGATTAC
GCTCATTCTCAAAGCAATTAATTGCCATCCAATTGGGCCATGGTGGTAGAAAAGCTTCTGGTCAGCCCTTATTTTTG
CACTTGAACAAGTTGCAGATAAATCTGTCAATGGGTTTGCCGACAAAGCAGTTGCTCCTTCTGCATTGGCATTCCAGA
CCAAATGGTAATTTAAGTGTCTTAATGAGTTGACCAAAGATGAATCAAACGTGTTGTTAAGGATTTTGGTGTCTGCT
GCTAGAAGAGCTGTTGAAATCAGTGGCTTTGATGCAGTTGAGATTCATGGTGCTCATGGTTATTTGATTATGAGTTC
TATAGTCTGATTTTCAAACAAGAGAACAGATGAATACGGTGGCAGTTTGAAGAAATAGAACCAGGATTTTAAAGGAAGTT
ATCGATAGTGTTAAATCAAGTATTCCAAACGATGTTCCAGTGTTTTGAGAAATCTCTGCTGCTGAAAATAGTCTGAT

CCAGAAGCTTGGACTATTGAAGATTCCAAAAAATTAGCTGACATTTTAGTAGAAAAAGGGTATTGCTTTGGTTGATGTT
TCATCTGGTGGTAACGATTATAGACAACCACCAAGATCTGGGATCAGTAAAGAGTTGAGAGAGCCAATCCATGTTCCG
TTGTCTCGTGCAATTAACAACATGTTGGTGACAAGTTATTGGTCAGTTGCGTTGGTGGGCTTGAAAAAGATCCTGAA
TTGCTCAACAAATATTTAGAAGAAGGAACATTTGATCTTGCTTTGATCGGTAGAGGATTTTTAAGAAATCCAGGTTTG
GTATGGGAGTTTGCCGATAAACTTGGTGTTAGACTCCACCAGGCCTTGACAGTTAGGTTGGGGTTTCTGGCCCAACAAA
CAACAAATTGTTGATTTGATTGAAAGAATCATTAATTAGAAGTAAATTAG

SEQ ID No 12

MTVPYQVKPSDEIKGAPEVSYTPEQVPAGTFYPQSSDEVAPKIFQPLKIGKLALPNRIGVSPMCQYSADYNFEATP
YHLIHYGSLVNRGPGITIVESTAVSPEGGLSPHDLGIWKDEQAELKPIVDYAHSQQLIAIQLGHGGRKASGQPLFL
HLEQVADKSVNGFADKAVAPSAALAFRPNGLPVPNELTKDEIKRVVKDFGAAARRAVEISGFDAVEIHGAHGYLINEF
YSPISNKRTDEYGGSFENRTRFLKEVIDSVKSSIPNDVPVFLRISAAENSPDPEAWTIEDSKKLADILVEKGIALVDV
SSGGNDYRQPPRSGISKELREPIHVPLSRAIKQHVGDKLLVSCVGGLEKDPPELLNKYLEEGTFDLALIGRGFLRNPGL
VWEFADKLGVLHQLALQLGWGFWPNKQQIVDLIERTSKLEV

SEQ ID No 13

ATGGAAAAACAACAATACTATACCGGCATTATTTCAACCCATAAAGATCAGTGACTCGATCACATTACCTAATAGAATT
GGTGTTCACCAATGTGCATGTATTCATCGTCACCAACTGACAATCAAGCCACTCTGTTTCATTTTGTTCATTATGGA
TCATTTGCTGTACGTGGACCAGCATTAATCATTTTAGAGAGTATCTTTGTGTCCGAAAATTCGGATTATCCATTTCAT
GATTTAGGTCTTTGGAATGATGATCAAGCTCACAGTTTACGGAAAATTGTTGATTTTATTCATGATCAAGACGGAATT
TGCTGTATACAATTGAATCACGCTGGGCGAAAGATTGTTGAAGGGGTACCATTTCCAACAAATACAACATGGTTGGCAA
GAACATTGTGTGGGGCCATCTACTGAGCCATTTAGTGATTCACACAATACACCACGAGAATTGACTGTTAATGAAATA
AATTC AATTGTGGAAGACTTTGCCAATGCAGCTTGGCGGGCTGTGGAAATCTCAAATTCGATGCCATTGAAATACAT
TGTGCTAATGGATGTTTAAATACACCAATTTTTAAGTAAATTGACAAACAAGAGAGCTGACCAATACGGGGGCTCATTT
GAAAACAGAGTTAGATTTCTTTTACAAATAATTGAGAATATAAAACGAAAGATAGAAACACCGATTTTCTTAAAGTTT
CCAATGTGAGATAATTGTAGTGATCCGGAAGCGTGGTCTACGGAAGATGCATTGAAGTTGGCCGATCTTGTTATTGAT
TTAGGAGTAAAGGTGATCGACGTTACATCAGGTGGAATGTTGCGCATTGCAAATCTAGATATCTATTAAATGACGAC
AAACAACTACCTTCTCAAGTGCCCTTGGCTCGTAAATTGAAAAGCCACATTAGAAACCGATGTTTGATCGCATGCAGT
GGAGGATTAGATCGAGACATATTTAAACTCGATGAGTTTATTGCTAATGGTGACTTTGATATAGCATTGATAGGTAA
GGATTTCTCAAAAACACTGGATTGATCAGCCGTATTGCTGACCAATTGCAAGCACAATTGAGAACAGCACCTCAATAT
AAGTTGGCCTTATCATAA

SEQ ID No 14

MENNNTIPALFQPIKISDSITLPNRIGVSPMCMYSSSPDNDQATLFHFVHYGSFAVRGPALIIILESIFVSENSGLSIH
DLGLWDDQAHSLRKIVDFIHDQDGIICCIQLNHAGRKIVEGVFPQIQHGWQEHCVGPSTPEFSDSHNTPRELTVNEI
NSIVEDFANAARAVEISKFDAIEIHCANGCLIHQFLSKLTNKRADQYGGSFENRVRFLQLIIENIKRKIETPIFLKF
PMSDNCSDPEAWSTEDALKLADLVIDLGVKVIDVTSGGNVAHCKSRYLLNDDKQLPSQVPLARKLKLSHIRNRCLIACS
GGLDRDIFKLDEFIANGDFDIALIGKGFKNLTGLISRIADQLQAQFRTAPQYKLALS

SEQ ID No 15

ATGGCCGACTTCACCCAGAAGAAGACCTCCTCCCCCGCGGCCCGGGTGTTCCTTCTACACCCCGGCCAGGTCCCC
GCCGCCGGCACTCCCCTCCCCTCCACCCCGCGGATGTCCCTACTCTCTTCACCCCTCTCAAGATCCGTGGTGTGAG
CTCCAGAACCCTTCGCGCTTGGCGCCATGTGCACCTACTCTGCGCAGATGGCCACATGACCGACTGGCACCTTGTC
CACCTGGGCTCCTTCGCCCCTCCGCGGTGTCCCCCTCACCATCTTCGAGGCCACCGGCGTCTCCCCAACGGCCGCATC
ACCCCGAGTGCTCTGGTCTCTGGCAGGACTCCAGATTGCGCCCCCTCAAGCGCATCGTCGACTACATCCACTCCCAG
GGCCAGAAGGCCGGTATCCAGCTTGCCACGCGCGGCGCAAGGCCTCCACCAAGGCCCCCTGGCACTACCAGCGCGGC
AAGAGCGAGCTTGCCGGCCCCGAGCAGGGTGGCTGGCCCGAGAACGTCTGGGCCCCAGCGCCATCAGCTACAACGAG
GAGACCTTCCCCTTCCCCAAGGAGATGACCGTCGAGCAGATCCACGAGCTCGTCGAGGCCTGGAAGGCGTCTGCCAG
CGTGCCCTCAAGGCCGGCTTCGACCTCATTGAGATCCACGCGCCACGGCTACCTCATTTCCGAGTTCTTGAGCCCC
ATCTCCAACAGCGTACCGACAGTACGGTGGCTCCTTCGAGAACCGCACCCGCGTCTCCGCGAGATCATCTCGGCC
GTCCGCTCCGTATCCCCGAGGACATGCCCTCTTCGTCCGTGTCTCCGCCACCGAGTGGATGGAGTACACCGGCCAG
CCCTCGTGGGACCTCCAGCAGACCATTTGAGCTCGCCAAGATCCTCCCCGACCTCGGCGTTCGACCTCCTCGACGTCTCT
TCCGGCGGCAACAACAAGGACCAGAAGATCAACGTCCACCTACTACCAGATCGACATGGCCGAGCAGATCCGCGCG
GCCGTGACGAGGCCGCAAGCAGCTCCTCGTCCGTGCCGTGGCTTGGTCACTCGGCTGAGATCGCCAAGGAGACC
GTCCAGGAGAAGGAGGATGGCAGAGTACCATCCAGCGCGAGAACGGCGCCAAGACTCGTGCCGATATGGTCTTGT

GCCAGGCAGTTCTTGAAGGAGCCCGAGTTCGTCTCACTGTGCGCCGACGAGTTGGGTGTTGATGTCAAGGCCCTGTT
CAGTACCTCCGTGGTCTCTTAGCAGCAGGCCCAAGAAGTTGACCACTGTTCTTAA

SEQ ID No 16

MADFTQKKTSSPAAPGVPFYTPAQVPAAGTLPSTPGDVPTLFTPLKIRGVELQNRFAVAPMCTYSADDGHMTDWHLV
HLGSFALRGVPLTIFEATGVLPNGRITPECSGLWQDSQIAPLKRIVDYIHSQGQKAGIQLAHAGRKASTKAPWHYQRG
KSELAGPEQGGWPENVWAPSAISYNEETFFPKEMTVEQIHELVEAWKASAQRALKAGFDLIEIHAAGHYLISEFLSP
ISNQRDQYGGSFENRTRVLREIISAVRSVIPEDMPLFVRVSATEWMEYTGQPSWDLQQTIELAKILPDLGVLLDVS
SGGNKDKINVHTYYQIDMAEQIRAAVHEAGKQLLVGAVGLVTSAEIAKETVQEKEDGRVTIQRENGAKTRADMVLV
ARQFLKEPEFVLTVADELGVVDVKAPVQYLRGPLSSRPKKLTTPV

SEQ ID No 17

atggctacttccactacctccgacctcaaactctcccaacccctcacctccccaatggccttaccctccccaaccgc
ctcgctcaaagccgcatggccgaacaaatgggcttcggaaccacctgccaaccccgaaactcgccgctctacgcc
acctgggcccgcggcgactggggcctgattctcaccggcaacgtccaagtcgaccacgcgcacaagggcgacgcccac
gacatcagcccccaaccaccccgccaccacgcccagcagaccgtcacggccttcaaggcctggcgagcgcgcgcgc
ctgaatggccagtccaaaacgcctgtggtcggtgcagatcaaccacccctggcgccagagtcgatggcgcgggcagc
cggggactgtgggagaaggcggtggcgccctcgccggtgcccgttggtgttgggagaggcggttgcctcgcttgttg
tcgaaagtgccttttcggcacgcgcgggagctgacggttgccgagatcaaggatatcgctgcaaaagtttgcggtgacg
gcgaggatcacggccgagggcggttcaatggcggtggagatccatgcggcgcatggatacctgttggcgagttcttg
agcaagaagacaaaacaggcgccgggatgagtatggcggtcgctgagaaacagggcgaggattgttggggagattatt
aaggagtgacaggagggcaggtgactgaggcggtgggtgaagaggaggcggaagaagtttgtggtgggaatcaagctgaac
agtgcggatttggcaggcgggacgcgatggaaggaggaggagagacggatacggcgaggaggtgttgaagcagatt
gagctttttgagcagtgggggatcgactttgtcgaggttagcggtggcagttatgaggatcctcaggtaagttttggt
gttgtttgagggatggggcaaggggttgcctgtcgatgaacaacaaaaggggcacggaacaaatgctaaccgcatacag
atggccaacggtcccaagccgaaaagtcgaacgcaccatggcccgagggccttcttctcgagttcgccaagatc
atccgcaccaagttccccaagcttctctcatggtcacccggcggttccgcactcgctcagggcatggaggccgctttg
gaatccgatgattgcgacatgatcggtatcgagcgcggccatcatcaacccttcgcttcccgccaacttgatcctc
aaccggaggtgcccgatgcccgttgccttcgacaagaaggagggctgagccgactggatcggttgagaagttg
ggcatgaagtccattgttgggtgctggtgttgaggtggtacgtcacgttccaaccccatgttgcattgtgtttccga
gtatgtcatgctgacttgggttcttttctagacgtggtatgtgagcgagctcaagaagctggccaagttttag

SEQ ID No 18

ATGGCTACTTCCACTACCTCCGACCTCAAACCTCTCCCAACCCCTCACCTCCCCAATGGCCTTACCCTCCCAACCGC
CTCGTCAAAGCCGCCATGGCCGAACAAATGGGCTTCGGCAACCACCTGCCCAACCCCGAACTCGCCGCGCTCTACGCC
ACCTGGGCCCCGCGGCGACTGGGGCCTGATCTCACCGGCAACGTCCTCAAGTCGACCACGCGCACAGGCGCAGCGCCAC
GACATCAGCCCCAACACCCCGGCACCGCCGAGACCGTCACGGCTTCAAGGCTTGGCGGCGGCGCGCGC
CTGAATGGCCAGTCCAAAACGCCTGTGGTTCGTGCAGATCAACCACCTGGTCGCCAGAGTCCGATGGGCGCGGGCAGC
CGGGGACTGTGGGAGAAGGCGGTGGCGCCTCGCCGCTGCGGTTGGTGTGGGAGAGGCGTTTGTGCCTCGCTTGTG
TCGAAAGTGCTTTTCGGCACGCCGCGGGAGCTGACGGTTGCGGAGATCAAGGATATCGTGCAAAAGTTTGCGGTGACG
GCGAGGATCACGGCCGAGGCGGGTTCAATGGCGTGGAGATCCATGCGGCGCATGGATACCTGTTGGCGCAGTCTTTG
AGCAAGAAGACAAAACAGGCGCGGGGATGAGTATGGCGGGTCGGCTGAGAACAGGGCGAGGATTGTTGGGGAGATTATT
AAGGAGTGACAGGAGGCAGGTGACTGAGGCGGTGGGTGAAGAGGAGGCGAAGAAGTTTGTGGTGGGAATCAAGCTGAAC
AGTGCGGATTGGCAGGCGGGACGCGATGGAAGGAGGAGGAGGAGACGGATACGGCGGAGGAGGTGTTGAAGCAGATT
GAGCTTTTTCGACAGTGGGGGATCGACTTTGTGAGGTTAGCGGTGGCAGTTATGAGGATCCTCAGATGGCCAACGGT
CCCAAGCCCGAAAAGTCCGAACGCACCATGGCCGCGAGGCTTCTTCTCGAGTTCGCCAAGATCATCCGCACCAAG
TTCCCCAAGCTTCTCTCATGGTCACCGCGGGCTTCCGCACTCGTCAGGGCATGGAGCGCGCTTTGGAATCCGATGAT
TGCGACATGATCGGTATCGGACGCCCGGCATCATCAACCCTTCGCTTCCCGCCAACTTGATCCTCAACCCGAGGTG
CCGATGCGGATGCCCCGCTTGTTCGACAAGAAGAGGGCTGAGCCGCACTGGATCGTTGAGAAGTTGGGCATGAAGTCC
ATTGTTGGTGCTGGTGTGAGGTGACGTGGTATGTGAGCGAGCTCAAGAAGCTGGCCAAGTTTTAG

SEQ ID No 19

MATSTTSDLKLSQPLTLPLNGLTLPLNRLVKAAMAEQMFGNHLPLNPELAAYATWARGDWGLILTGNVQVDHAHKGDAH
DISPNHPGTTPEQTVTAFAKAWADAARLNGQSKTPVVVQINHPGRQSPMGAGTRGLWEKAVAPSPVPLVLGEAFVPRLL

SKVLFGTPRELTVAEIKDIVQKFAVTARITAEAGFNGVEIHAAHGYLLAQFLSKKTNRGDEYGGSAENRARIIVGEII
KECRRQVTEAVGEEAAKFVVGIKLNSADWQAGRDGKEEETDTAEVVLKQIELFEQWIDFVEVSGGSYEDPQMANG
PKPEKSERTMAREAFFLEFAKII RTKFKPLPLMVTGGFRTRQGMEEALESDDCDMIGIGRPAIINPSLPANLIILNPEV
PDADARLFDKKRAEPHWIVEKLG MKSIVGAGVEVTWYVSELKKLAKF

5

SEQ ID No 20

10 atgtcggcgagaaaagaagacttttgagcaaacggcgccggggtgccttactacaccccagcccaggagccgcccggca
gggaccccttttgacgagcaggacgccaacgctgttcaagcctctgaagatccgtggcgctcgagctctccaac
cgctttggcgctctcgcccatgtgcacctaactcagccgacgatggccacctgaccgacttccacttgggtgcacctgggc
cagttcgccctgcacggcacggccctgaccattgtcgaggccacatccgtcacgcccacggagcgcacatctcgcccgag
15 gacagcgccctgtggaagacagccagatcgctcctctcgcccgcatcgctcgactacgtgcacagccaggggccaaaag
atcgccatccaactggctcatgcccggcgcaaggccagcacaaaaggccccctggcacgactccttcacccccagcggc
gagtataagccgagagagggccttacaggtcgctcggaacccgagtagtgccggctggcctgatgacgtctgggccccgagc
gcatcccgcttctcgaggagactttccgaaccccaaggagatgaccgttgaggagattgagggactcgtaaccagcttt
gtggacgctgccaagcggtgcatcgagccggcgctcgacattattgagattcacggcgctcacggttacctgatcacc
20 gattccttttcgccgctatcaaacgtaagtgagatactttgtgtggggctgtgcgcatactccctcgggtgtgactt
ctattaacattttatttccctggcacgcagaaacggacagacaagtacggcgccgagctttgagaaccgcacccgggtcc
tgatcgatattatcaaggccgtccggcgagtgattcccgaggagatgccactcttcgtccgaatctccgcgaccgaat
ggatggagtagcggcgagcctagctgggacctcgagcagagcacacagcttgccaagctcctccggacctgggtg
tcgacctgctcgacgtcgctcgggcggaactcggtggccaaaagatcgagctcacgccgtactaccagatcgacc
25 tggcagccaagatccgagggcgctcgccgataggttgctcatagggcgggctcggaacatcaacacggctgacattg
cgcgcgatgtcggtgatgagcagggcgccgagaaggtggccgaggccaagcagacgcatgacaccatcgaggtcggtga
gcgaatcacatggcggaagcgaagcgagatctggtcctcattgctcgccagttcctcgcgagcctgagtttgtgc
tgaggacggcgcataaccttgggggtcaatgtgcagtgccctcaccaataaccacagagcagtggtggcgcaagggtgcaa
ggatttga

30

SEQ ID No 21

ATGTCGGCAGAAAAGAAGACTTTGAGCAAACCGGCCGCCGGGGTGCCTTACTACACCCCAGCCCAGGAGCCGCCGGCA
GGGACCCCTTTGCAGCAGCAGGACGCCATCCCAACGCTGTTCAAGCCTCTGAAGATCCGTGGCGTCGAGCTCTCCAAC
35 CGCTTTGGCGTCTCGCCCATGTGCACCTACTCAGCCGACGATGGCCACCTGACCGACTTCCACTTGGTGCACCTGGGC
CAGTTCGCCCTGCACGGCACGGCCCTGACCATTTGTCGAGGCCACATCCGTACGCCCCAACGGACGCATCTCGCCCGAG
GACAGCGCCCTGTGGCAAGACAGCCAGATCGCTCCTCTGCGCCGCATCGTCGACTACGTGCACAGCCAGGGCCAAAAG
ATCGCCATCCAACCTGGCTCATGCCGCCGCAAGGCCAGCACAAAAGCCCCCTGGCACGACTCCTTACACCCCAGCGGC
40 GAGTATAAGCCGAGAGAGGGCTTACAGTTCGTGCGACCCGAGTATGGCGGCTGGCCTGATGACGTCTGGGCCCGAGC
GCCATCCCGTCTCTCGGAGGACTTTCGGAACCCCAAGGAGATGACCGTTGAGGAGATTGAGGGACTCGTCACCAGCTTT
GTGGACGCTGCCAAGCGTGCCATCGAGGCCGGCGTCGACATTATTGAGATTACGGCGCTCACGGTTACCTGATCACC
GAGTTCCTTTTCGCCGCTATCAAACAAACGGACAGACAAGTACGGCGGCAGCTTTGAGAACCGCACCCGGGTCTGATC
45 GATATTATCAAGCCGTCCGGGCAGTGATTCGCGAGGAGATGCCACTCTTCGTCCGAATCTCCGCGACCGAATGGATG
GAGTACGCCGGCGAGCCTAGCTGGGACCTCGAGCAGAGCACACAGCTTGCCAAGCTCCTCCCGGACCTGGGTGTCGAC
CTGCTCGACGTGAGCTCGGGCGGAACTCGGTGGCCCAAAAGATCGAGCTCACGCCGTACTACCAGATCGACCTGGCA
GCCAAGATCCGCGAGGCCGTCCGGCGATAGGTTGCTCATAGGCGGGTCCGGCAACATCAACACGGCTGACATTGCGCGC
50 GATGTCGTGGATGAGCAGGGCGCCGAGAGGTTGGCCGAGGCCAAGCAGACGCATGACACCATCGAGGTGTCGAGCGAA
TCACATGGCGGCAAGACCAAGGCGGATCTGGTCCTCATGCTCGCCAGTTCCTGCGCGAGCCTGAGTTTGTGCTGAGG
ACGGCGCATAACCTTGGGGTCAATGTGAGTGGCCTCACCAATACCACAGAGCAGTGTGGCGCAAGGGTGAAGGATT
TGA

50

SEQ ID No 22

MSAEKKTLSKPAAGVPYYTPAQEPFAGTFLQQQDAIPTLFKPLKIRGVELSNRFGVSPMCTYSADDGHLTDFHLVHLG
55 QFALHGTALTIVEATSVTPNGRISPEDSGLWQDSQIAPLRRIVDYVHSQGGKIAIQLAHAGRKASTKAPWHDSTFSG
EYKPREGLQVVGPEYGGWPDDVWAPSAIPFSEDFPNPKEMTVEEIEGLVTSFVDAAKRATEAGVDIIIEIHAGHYLIT
EFLSPLSNKRTDKYGGSFENRTRVLIDIIKAVRAVPEEMPLFVRISATEWMEYAGEPSWDLEQSTQLAKLLPDLGVD
LLDVSSGGNSVAQKIELTPYYQIDLAAKIREAVGDRLLIGAVGNINTADIARDVVDEQGAEKVAEAKQTHDTIEVVSE
60 SHGGKTKADLVLIARQFLREPEFVLRTAHNLGVNVQWPHQYHRAVWRKGARI

60

SEQ ID No 23

5 ATGACTATTGTTAATGAAGGAGCCGAAAAATGTTGGTTATTTTACACCTGCGCAAAAAATACCAGCTGGAGCGGCGATA
GGTGTACCGCAAAACAAATATTACTCTCTTAAATTAGAGGAGTGGAGTCCATAACAGAATGTTTGTTCGCCG
ATGTGCACCTATTCCGCTGACCAAGAAGGGCATTGACAGATTTTACCTAGTACATCTTGGAGCGATGGGAATGCGT
10 GGGCCTGGCCTTGTAATGGTAGAAGCGACAGCGGTTTCCCCAGAGGGACGAATTTACCTAATGATTGAGGATTATGG
ATGGAGTCGCAAAATGAAGCCGTTACGAAGAATTGTTGAATTTGCTCATTGCAAAATCAAAAAATTGGGATTCAATTG
GCGCATGCTGGTAGAAAGGCTAGCACCCTGCTCCTTATCGAGGATACACAGTTGCGACTGAAGCTCAAGGTGGGTGG
GAGAATGATGTTTATGGACCAAATGAAGACAGGTGGGACGAAAACCACGCTCAACCTCATAAGTTAACTGAAAAGCAA
15 TATGATGAATTAGTGGATAAGTTTGTGTTGCTGCGAAGCGTGCAGTTGAAATAGGTTTGTATGTAATTGAAATTCAT
GGCGCTCATGGTTATCTTATATCGTCAACAGTTAGTCCTGCCACTAATGACCGCAATGACAAGTATGGTGGGACATTT
GAGAAACGTATTTTGTTCCTATGGAAGTTGTCCATTCTGTTGTAAGCAATTCAGATAGTATGCCCTTGTTTTAT
AGAGTAACGGCTACAGATTGGTTGCCCAAAGGACAAGGATGGGAGATAGAAGATACAGTTGCATTAGCAGCGAGGCTT
20 CGCGATGGTGGTGTGACTTGATAGATGTTAGCTCTGGTGGTAATCACAAGGATCAAAGAATTGAGGTGAAGGATTGC
TATCAAGTTCCTTTTGCAGAAAAGATTAAGGATCAAGTGAATGGAATACTACTTGGCGCTGTCGGAATGATCAGGGAT
GGTCTTACGGCGAATGAAATCCTAGAAAGTGAAAAGTGCATGTTACTTTTGTGCGCAAGGGAGTCTTAAAGAACCCG
TCGTTGGTGTAGACAGCGCGAACCAGTTGGGTGAAAATGTTGCATGGCCAGTTCAGTATGACTATGCAGTTAAGGGA
CACAGAAAGTTACGTTGA

SEQ ID No 24

25 MTIVNEGAENVGYFTPAQKIPAGAAIGVPQTKLFTPLKIRGVEFHFTNRMFVSPMCTYSADQEGHLTDFHLVHLGAMG
MRGPGLVMVEATAVSPTEGRISPNDGLWFTMESQMKPLRRIVEFAHSQNKIGIQLAHAGRKASTTAPYRGYTVATEA
QGGWENDVYGFPTNEDRWDENHAQPHKLTEKQYDELVDKFFVAAKRAVEIGFDVIEIHGAHGYLISSTVSPAFTTNDNR
NDKYGGTFEKRILFFMEVVHVSVRKAIPDSMPLFYRVATDOWLPGQGWEIEDTVAFTLAARLRDGGVDLIDVSSGGNH
KDRIEVDKCYQVPFAEKIKDQVNGILLGAVGMIRDGLFTTANEILES GKADVT FVAREFLRNPSLVLDSANQLGENV
AWPVQYDYAVKGHRKLR

SEQ ID No 25

30 CGAAACCTCGACCCAAACAAACAGCTGACCCTCTCCTTGACAACAAAGCCGGCCATCCTCGCCGACGATTGCCTCTAC
CCCCGCATAGTCACACTCGCACGTCCTGTTCTCCACCGTCAAACAGACAGCATGACGGGCACCGCGAACAAGGCCGCC
CCCGGTGTGCCGTTTTACACCCCGGCCAGGAGCCTCCCGCGGGAACGCCAGTCGACGCCAGCACGGCTCCGACGCTC
35 TTCAAGCCCCCTCCGTCATCCGCGACCTACCATCAACAACCGCATCTGGGTGAGCCCCATGTGCCAGTACTCCGCCGAC
AATGGCCACGCGACCGACTACCACCTCGTCCACCTGGGCCAGTTGCGCCTGCACGGCGCCGCTGTCCATGGTCGAG
GCCACCGCCGTCGAGGCTCGTGGCCGCATCTCCCCGAGGATGTGCGTTTGTGGCAGGACTCGCAGATTGCGCCGCTG
AAGCGCATCGTGCAGTTTATCCACTCGCAGAACCAGGTGCGGCCCATCCAGCTCGCCCACGCCGCTGCGAAGGCTAGC
40 ACCCTGGCACCGTGGATCACCGAGGCTCGCGCAAGGCGTGGCTCAGGAGAGCGAGAACGGCTGGCCCCACGACGTT
GTGGCTCCCAGCGGATTCCTTACACCAAGGACTGGGCCACACCGCGTGAGTTGACTACCGAGGRRGTGAGGGTCTG
GGTGAAGAAGTTCGCCGAGTCGGCCAAGAGGTCAAATCGAGCTGGTTTTGACGTCATTGAGATCCACGCCGCTCA

SEQ ID No 26

45 ATGACGGGCACCGCGAACAAGGCCGCCCCCGGTGTGCCGTTTTACACCCCGGCCAGGAGCCTCCCGCGGGAACGCCA
GTCGACGCCAGCACGGCTCCGACGCTCTTCAAGCCCCCTCCGCATCCGCGACCTCACCATCAACAACCGCATCTGGGTG
AGCCCCATGTGCCAGTACTCCGCGACAATGGCCACGCGACCGACTACCACCTCGTCCACCTGGGCCAGTTGCGCCTG
50 CACGGCGCCGCCCTGTCCATGGTCGAGGCCACCGCCGTCGAGGCTCGTGGCCGCATCTCCCCGAGGATGTGCGTTTG
TGGCAGGACTCGCAGATTGCGCCGCTGAAGCGCATCGTCGACTTTATCCACTCGCAGAACCAGGTGCGGCCATCCAG
CTCGCCACGCCGCTCGCAAGGCTAGCACCTGGCACCGTGGATCACCGAGGCTCGCGGCAAGGCGCTGGCTCAGGAG
AGCGAGAACGGCTGGCCCCGACGACGTTGTGGCTCCAGCGCGATTCTTACACCAAGGACTGGGCCACACCGCGTGAG
TTGACTACCGAGGRGTGAGGGTCTGGGTGAAGAAGTTCGCCGAGTCGGCCAAGAGGTCAAATCGAGCTGGTTTTGAC
55 GTCATTGAGATCCACGCCGCT

SEQ ID No 27

60 MTGTANKAAPGVFFYTPAQEPAGTPVDASTAPTLFKPLRIRDLTINNRIWVSPMCQYSADNGHATDYHLVHLGQFAL
HGAALSMVEATAVEARGRISPEDVGLWQDSQIAPLKRIVDFIHSQNVAAIQLAHAGRKASTLAPWITEARGKALAE
SENGWPDDVAPSAIPYTKDWATPRELTTEXSRVWVKFAESAKRSNRAGFDVIEIHAA

SEQ ID No 28

5 GAACTGCTGTAGATGTGGTTGAATTGGTATATTAGACCGGAGTACTCTATATGCGAGAGACTATACATTGAAGTTGCC
AACGTTCTTCCAGATTGATTAATCATGGCTTACGAGATAATCGACAACGTTGCGGCTGAAGGGGTTCCATATTACACA
CCGGCTCAAGACCCGCCAGCTGGTACGCAGACAAGCGGCTCAACGAAGCTATTACACCCATCACCATCCGCGGCGTC
ACATTCCCAAACCGCTCTTCCCTTGCCCCCTCTCTGCCAATACTCCGCCAAAGATGGTTATGCCACTGATTGGCACTTG
ACTCACCTCGGGGGAATAATCCAAAGAGGCCCCGGATTGTCCATGGTGGAGGCTACCGCTGTACAAAACCACGGTCGC
10 ATCACACCTCAGGATGTTGGTCTGTGGGAAGACGGCCAGATCGAGCCTCTGAAGCGCATCACCACCTTTCGCGCACAGT
CAGAGCCAGAAAAATTGGTATCCAGCTGTCGCATGCGGGTCGCAAGGCCAGTTGCGTATCTCCCTGGCTAAGCGTAAAT
GCTGTGCGGCGGGAAGAAGTGGGTGGCTGGCCAGACAATATCGTTGCTCCCTCGGCCATCGCACAGAAAAATGGTGTG
AACCCAGTTCCCAAGGCTTTCACGAAGGAGGATATAGAGCAACTCAAGAGCGACTACGTGGAAGCGGCAAAACGAGCC
ATCCATGCTGGTTTCGATGTTATCGAAATTCATGCAGCTCATGGATATCTACTGCATCAATTCTTGAGTCCGGTAAGC
AATCAAAGAACCGACGAGTATGG

SEQ ID No 29

20 ATGGCTTACGAGATAATCGACAACGTTGCGGCTGAAGGGGTTCCATATTACACACCGGCTCAAGACCCGCCAGCTGGT
ACCGAGACAAGCGGCTCAACGAAGCTATTACACCCATCACCATCCGCGGCGTCACATTCCCAAACCGCCTCTTCCCTT
GCCCCCTCTCTGCCAATACTCCGCCAAAGATGGTTATGCCACTGATTGGCACTTGACTCACCTCGGGGGAATAATCCAA
AGAGGCCCCGGATTGTCCATGGTGGAGGCTACCGCTGTACAAAACCACGGTCGCATCACACCTCAGGATGTTGGTCTG
TGGAAGACGGCCAGATCGAGCCTCTGAAGCGCATCACCACCTTTCGCGCACAGTCAGAGCCAGAAAAATTGGTATCCAG
CTGTGCGATGCGGGTCGCAAGGCCAGTTGCGTATCTCCCTGGCTAAGCGTAAATGCTGTGCGGCGGGAAGAAGTGGGT
GGCTGGCCAGACAATATCGTTGCTCCCTCGGCCATCGCACAGAAAAATGGTGTGAACCCAGTTCCCAAGGCTTTCACG
25 AAGAGGATATAGAGCAACTCAAGAGCGACTACGTGGAAGCGGCAAAACGAGCCATCCATGCTGGTTTCGATGTTATC
GAAATTCATGCAGCTCATGGATATCTACTGCATCAATTCTTGAGTCCGGTAAGCAATCAAAGAACCGACGAGTATGG

SEQ ID No 30

30 MAYEIIDNVAAEGVPYYTPAQDPPAGTQTSGSTKLFTPIITIRGVTFENRLFLAPLCQYSAKDGYATDWHLTHLGGIIQ
RGPGLSMVEATAVQNHGRITPQDVGLWEDGQIEPLKRITTFHAHSQSQKIGIQLSHAGRKASCVSPWLSVNAVAABEYV
GWPNDIVAPSAIAQENGVPVPAFTKEDIEQLKSDYVEAAKRAIHAGFDVIEIHAHGYLLHQFLSPVSNQRTDEY

SEQ ID No 31

35 TTTGGATGGTATAATAATAATTCTATTTGTGAAACATACGGGGCTGGTCTTGATCAAGAACGGTCCATCTATGGTCTA
TAAAGAACTCTTGTTCACTTTCTTTCCACGTCCTTGAAGCTCCAATCAATCTGGTTTCGCCATCTTGACCTCCACGCC
AAGCTCGTTAGCAAAAGCTCGAACCAGACCAGGATTCTGTTGGAACCAACGTCCAGCCCTCACAATGTGATACCAAGA
TTGCAAAACCTCTTCAGCAAGATGTCCAGTCTTGATTCCACCTACTGCTGAAACAAGTACACTATCGCCAACAGCCTT
40 CTTTACCTGTTTGGCGAGGTCTACCTGGTAAGCAGGACCGGACTTGATGGCGATGGCGGACTTAGGATGGATACCGCC
TGAGCTGACGTCCACCAAGTCTACTCCATGCTTGGGCAAGATACGCGCGAGTTGACAAGTCTGCTCGACTGTCCAGCT
TTCAGGAACTCGTCTTTGAATTGAGAGTCAAACCTCGAACCATCAGTTGCACTGACACGACGAGGACAGGTGTAGT
TTCGGGGATGGCAGCGCGGATGAGGTCAAGGATTTCCAAGACAACCTCTGATACGGTTCTCGAAACTGCCACCATACTC
GTCCGGT

SEQ ID No 32

50 AACCGACGAGTATGGTGGCAGTTTCGAGAACCGTATCAGAGTTGTCTTGAAATCCTTGACCTCATCCGCGCTGCCAT
CCCCGAAACTACACCTGTCTCTCGTTCTGTGTCAGTGCAACTGATTGGTTCGAGTTTGAAGTCTCAATTCAAAGACGAGTT
TCCTGAAAGCTGGACAGTCGAGCAGACTTGTCAACTCGCGCGTATCTTGCCCAAGCATGGAGTAGACTTGGTGGACGT
CAGCTCAGGCGGTATCCATCCTAAGTCCGCCATCGCCATCAAGTCCGGTCCTGCTTACCAGGTAGACCTCGCCAAACA
GGTAAAGAAGGCTGTTGGCGATAGTGTACTTGTTCAGCAGTAGGTGGAATCAAGACTGGACATCTTGCTGAAGAGGT
TTTGCAATCTGGTATCGACATTGTGAGGGCTGGACGTTGGTTCCAACAGAATCCTGGTCTGGTTCGAGCTTTTGCTAA
55 CGAGCTTGGCGTGGAGGTCAAGATGGCGAACCAGATTGATTGGAGCTTCAAGGGACGTGGAAGAAAGTGAACAAGAG
TTCTTTATAG

SEQ ID No 33

TDEYGGSFENRIRVVLEILD LIRAAIPETTPVLVRVSATDWFEFDSQFKDEFPESWTVEQTCQLARILPKHGVLDLVDV
SSGGIHPKSAIAIKSGPAYQVDLAKQVKAVGDSVLVSAVGGIKTGH LAEEVLQSGIDIVRAGRWFQQNPGLVRAFAN
ELGVEVKMANQIDWSFKGRGKKVKNKSSL

5 SEQ ID No 34

AGGAAGTTGCATGTCACCTTGTAGTGACAGGGCGTCGTGTAAATTTTATAAATACCTATACTTGTGTTGTTCACTTCTAT
GCTACTCATATCAATCCGAGAAGATCAAACAGTCCCCTATACACACTTGTCAAGACCTATCTATTATTTCAAAAATCA
GCAATATGGCTGAGACAATGCCTAAGTGTGAGGCAAATGGCCATCACAAAATCATCATCAATAAGGAAGCTCCGAATG
10 TTCCTTTCTATACTCCAGTGCAAGATCCACCAGCAGGAACGTCTTACGATGTTCAAGCCTGAAGGAAGCCTATTTCTCTC
TTATTTAAATAAGAAACCTGACTCTTCAAAACCGGATTTTGTCTCCCAATGTGTCAATATTAGCAAAGGATGGTG
TCATGACCCCTGGCACAACAACACCTGGGCAGCTTCGACGACAGAGGTCCGGGTCTCATTGTACAGAAGTCAACG
CAGTTTCACCAGAGGGACGAATCAGTCTGAGGATGCAGGCATCTACGATGATGGGCAGCTTGGACCTCTCCGGGATA
TTGTGGACTTTGTACACAGCCAGGGCCCAAGATTGCTATTCAGATAGGTCTGCTGGGAGAAAAGCGAGCACAGTCTG
15 TACCGTGGCTGGACCGCAAGAACACTGCTTTTA

SEQ ID No 35

MPKCEANGHHKIIINKEAPNVFFYTFVQDFPAGTSYDVQPEGSLFSLIKIRNLT LQNRIFVSPMCQYSAKDGVMTFPHW
20 KQHLGSFAARGPGLIVTEVNAVSPGRISPEDAGIYDDGQLGFLRDIVDFVHSQGA KIAIQIGHAGRKASTVVPWLDR
KNTAF

SEQ ID No 36

GCACGAGGGATTATTGACAACATCGCGGCTGAAGGGGCTCCCTACTACACGCCTGCTCAAGACYCTCCAGCAGGCACA
CAGACCAGCGGCTCAACCAAGGTTTTCACACBCATCACCATCCGAGGCGTCACATTTCCCAAACCGTCTCTTTCTTGCC
CCTCTCTGTCAATACTCCGCCAAAGATGGATATGCTACTGATTGGCACTTGACTCATCTCGGAGGCATTATCCAACGA
GGCCCCGGGACTGTCATGGTAGAGGCCACCGCTGTTCAAAACACCGGTGCGATCACGCCTCAGGACGTTGGTCTCTGG
GAAGATGGACAAATCGAGCCCTTTGAAGCGCATCACTACTTTTGCCACAGCCAAAGCWCAGAAGATTGGTATTCAGC
30 TCTCGCACGCTGGTTCGTAAGGCTAGTTGTGTATCTCCGTGGTTGAGCATCAACGCTGTTGCCGCTAAGGAAGTCGGTG
GCTGGCCAGACAACATTGTTGCTCCTTCTGCCATCGCACAGAAGCTGGCGTGAACCCCTGTTCCCAAGGCCCTTACCA
AGGAGGATATCGAGGAACCAAGAATGACTTTCTGGCTGCAGCMAAACGAGCCAWCCGCGCTGGTTTTGATGTCATCG
AGATCCATGCAGCTCATGGATACTGCTTACCAGTTCTTGAGTCCAGTCAGTAACCAAGAACCGATGAGTATGGTG
35 GCAGCTTCGAGAACCGTATCAGAGTCTGCTTGGAGATCATTG

SEQ ID No 37

GCACGAGGGATTATTGACAACATCGCGGCTGAAGGGGCTCCCTACTACACGCCTGCTCAAGACYCTCCAGCAGGCACA
CAGACCAGCGGCTCAACCAAGGTTTTCACACBCATCACCATCCGAGGCGTCACATTTCCCAAACCGTCTCTTTCTTGCC
CCTCTCTGTCAATACTCCGCCAAAGATGGATATGCTACTGATTGGCACTTGACTCATCTCGGAGGCATTATCCAACGA
40 GGCCCCGGGACTGTCATGGTAGAGGCCACCGCTGTTCAAAACACCGGTGCGATCACGCCTCAGGACGTTGGTCTCTGG
GAAGATGGACAAATCGAGCCCTTTGAAGCGCATCACTACTTTTGCCACAGCCAAAGCCAGAAGATTGGTATTCAGCTC
TCGCGACGCTGGTTCGTAAGGCTAGTTGTGTATCTCCGTGGTTGAGCATCAACGCTGTTGCCGCTAAGGAAGTCGGTGGC
TGGCCAGACAACATTGTTGCTCCTTCTGCCATCGCACAGAAGCTGGCGTGAACCCCTGTTCCCAAGGCCCTTACCAAG
GAGGATATCGAGGAACCAAGAATGACTTTCTGGCTGCAGCMAAACGAGCCAWCCGCGCTGGTTTTGATGTCATCGAG
45 ATCCATGCAGCTCATGGATACTGCTTACCAGTTCTTGAGTCCAGTCAGTAACCAAGAACCGATGAGTATGGTGGC
AGCTTCGAGAACCGTATCAGAGTCTGCTTGGAGATCATTG

SEQ ID No 38

ARGIIDNIAAEGAPYYTPAQDXPAGTQTSGSTKVFTXITIRGVTFPNRLFLAPLCQYSAKDGYATDWHLTHLGGIIQR
50 GPGLSMVEATAVQNHGRITPDVGLWEDGQIEPLKRITTFAHSSQSQKIGIQLSHAGRKASCVSPWLSINAVAAKEVGG
WPDNIVAPSAIAQEAGVNPVPKAFTKEDIEELKNDFLAAXKRAXRAGFDVIEIHAAGYXLHQFLSPVSNQRTDEYGG
SFENRIRVVLEII

SEQ ID No 39

CCTCAAGATCCGAGGTCTTACCCTCCAGAACCGTATTATGTTGAGGGGGCTCTGCCAGTACTCTGCTCCCGACGGACA
CTACACAATGTGGCATCACACCCACATGGGCGGCATCATCCAACGCGGTCCCGACTCACCTGCGTTGAAGCCACAGC
CGTGACTCCTCAAGGTGCGATCACGCCTGAAGACGTGGTATCTGGCAAGATTCTCAGATCGAGCCTCTTGCCAAGGT
CGTCGAGTTTGCCCACTCCAGAACCAGAAGATCATGATTGAGTTGGCGCATGCGGGCCGCAAAGCGAGCACTGTGGC
ACCATGGTTAAGCGCGCGGCGATGTTGCTGGTGAGGACGTCAACGGATGGCCACAGGATGCTGGGCGCCCACTGCGAT
60 TCCATGGAACGAGAAGCACGCTGTCCCAAAGGAGATGTCGTTGGATGATATCGAGGCTTCAAGAAGGCGTTTGAGA

GGCGGTCAAGCGGGCATTGAAGGCTGGATTTGATGTTATTGAGATTACAATGCTCACGGATACCTCCTCCACGAATT
CATCTGCCTGAGAGCAACACCAGGACCGACAAGTACGGGCGGAAGCTGGGAAAACCGCACTCGTCTGACAATGGAAAG
TCGTGACCTTGTCCGCAGCATT

5

SEQ ID No

40LKIRGLTLQNRIMLRGLCQYSAPDGHYTMWHHTHMGIIQRGPLTCVEATAVTPQGRITPEDVGIWQDSQIEPLA
KVVEFAHSQNQKIMIQLAHAGRKASTVAPWLSGGDVAGEDVNGWPQDVWAPSAIPWNEKHAVPKEMSLDDIEAFKKA
GEAVKRALKAGFDVIEIHNAHGYYLLHEFICLRATPGPTSTGGSWENRRLTMESRRPCPQH

10

SEQ ID No 41

GACTGCCGAGTAAACGCGCCGGCAAGGAGGCGGGAGGATGGCCGGAGGATGTTGTGGGTCCGTGCGGTGGGGAGGACT
TTACGTGGGATGAGAGGTCTCGAGCGACCTAGTGGAGGCTACTATGCGCCGAGAGAGTGTGCGGTGAGAGAGATCA
15 AGGAGATGGTCCAAGACTGGGCGACAGCAGCGAAAAGGGCGGTGAAAGCGGGCGTGGATGTAATCGAAATCCACGGCG
CGCATGGGTACCTCATCCACGAATTCCTCTCACCATTACCAACCGCCGACAGATTCTTACGGCGGTTCTTTGAAA
ACCGTACCCGTCTACTCATTGAAATCGTAACAGCCGTCCGAGCCGCGATGCCCTCCAGCATGCCTCTCTCTCCGCC
TCTCCTCTACAGAAATGGATGGAAGATACCGACATCGGCAAGAAGTTCGGAAGCTGGGATGTGAAAGCACGATCAAGA
TCTCCAAAATCCTGGCCGACTTGGGCGTTGATCTCCTCGACGTGTCTTCCGGTGGGAATCATCCTCAGCAGAAAATCA
20 ACATGTTCAACACC

SEQ ID No 42

LPSKRAGKEAGWPEDVVGPSGGEDFTWDERSSSDPSGGYYAPRELSVREIKEMVQDWATAAKRAVKAGVDVIEIHGA
25 HGYYLIEHFLSPITNRRDTSYGGSFENRTRLLIEIVTAVRAAMPSSMPLFLRLSSTEWMEDTDIGKKFGSWDVESTIKI
SKILADLGVLDLDVSSGGNHPQQKINMFNT

SEQ ID No.

ATGTCCCCACCACGCTTCGAAGCGGCCCTGCCGACCCCTCACCGCTCGGCACGCCGCTCAAATACCCCGTCTCGGG
30 CGGTGCGCGCCCAACCGGTTCTCAACGCGGCCATGTCGGAGGGCCTGGCGACGTTTGACGAGGCGGACCGTCCAAG
CGCGCATCCCGACGGAGCAGCTGGTGCAGCTGTACCGGCGCTGGGGCCAGGGCGAGTGGGGCCAGATCCAGACGGCG
AACGTATGATCGACCCGGAGCACCTCGAGGCCCGGGCAACATGGTGGTGCCGCGCGACGCCGAGCCCTCGGGCGAG
CGCTTCGACATGTTTTCAAGCTCGCCGCCGCCCAAGGAGCAGGCAGCCTCATCGTCGCGCAGGTGGACACCC
GGTCGCCAGGCCCGCGGCAGCGTCCAGCAGCACCCATTAGCGCCAGCGACGTGCAGCTTAAGCAGGAGATGTTTGGG
35 TCAAAGTTTGGCGTGCCAGGCCCGCTACCAAGGAGGATATTAAGGCGGTGATTGAGGGTTTGGCCACACGGCCGAG
TACCTTGAAAAGGCCGTTTCGACGGTATCGAATTGCACGCCGCCACGGTTACCTGCTGGCCCAATTCCTGTCCGAA
ACAACCAACCAGCGCACCGACGAGTACGGCGGCAGCCTCGAAAACCGCATGCGGCTAATCCTCGAGGTCACGGCCGAG
GTCCGCAGGCGGACGAGCAAGAATTCATCCTCGGCATCAAAATTAACAGCGTCGAGTTCAGGAGAAGGGTTTCAAG
CCAGAGGAGGCGGTGCAGTTGTGCGAGGCCCTCGAGGCCGCGGCATGGATTTTGTGCGAGACGAGCGGCGGCACCTAT
40 GAGAGTTTTGGTTTTGCGCACCGCAAGGAGTCCAGCCGCAAGCGGGAGAATATTTATCGAGTTCGCCGAGGTTCATC
CGCAAGGCCGTCAAGCACATGGTGGTCTACACCACGGCGGTTCAAGACGGTGGGCGCCATGGTCGACGCGCTGCAG
GGCGTCGATGGGATAGGCATCGGGCGCGCAGCCGTTGCGAGCCGACCTCGCCAAGGACATCATCGCGGGCAAGGTG
TCCAGCATTATCAAATACGCCATGGGGGAGGACGAGTTTGTGCTGCAGTTGACTGCCTGCTCGGCGCAAATAAGGCTG
ATGGCCAAGGGCGAGGAGCCGTTTGACATCTCAAACGCCGACGAGGTGGCGCGGGTGACGCAGTTGATGGCGGAGGGC
45 AAGGTG

SEQ ID No. 44

MSPPRFEAAPADPSPLGTPKYPVSGRSAPNRFNLAAMSEGLATFDEADPSKRGIPTEQLVQLYRRWQGGEWGQIQTG
50 NVMIIDPEHLEAPGNMVPDRDAEPSGERFDMFSKLAAAAKEHGSILVAQVGHPRQARGSVQQHPISASDVQLKQEMFG
SKFGVPRPATKEDIKAVIEGFAHTAEYLEKAGFDGIELHAAHGYLLAQFLSETTNQRTDEYGGSLNRMRLILEVTAE
VRRRTSKNFILGKINSVEFQEKGFKEEAVQLCEALEAAGMDFVETSGGTYESFGFAHRKESSRKRENYFIEFAEVI
RKAVKHMVVYTTGGFKTVGAMVDALQVDGIGIGRAAGSEPDIAKDIAGKVSSI IKYAMGEDEFVLQLTACSAQIRL
MAKGEEPFDISNADEVARVTQLMAEGKV

55

SEQ ID No. 45

AGCTTAGACCTACAGAGCATTGCTACTGTAAGTTGTATTTCCGCTTCTCGCATAGAACAAAATATAACTGATGGTG
TAGGTATAAACTAGCATCCTCTTCCACCTTTCAGATCCCCCTGACAAGCACCTTATGGCTTTCGATGGAACAGCTA
TTCCTTCTACTGGTAAAAATAGGATACAGAGGCTACAATCAATACACCCTCGATAGAGGCTGTGCAATGTGGCCAAC
60 TGGCAACGCTGCGGTTAGTCATCGTCGGAGACTTTCTGGGATTCATTTCTTCCGAGTCTCCGCTGCTTATTAAGGC

5 ATCAATCTGGATGCTCCACTGTGGTACATCCAATTTTCGATTTTCTTCGGCAGAGGCAAGGATTCCACTGGTTCAGT
CTAGGCATTTAGAAGATCAAAGCTGTCCTGTACCTCCGTACCTGGGTGTTTCGACGTCATTGCCACGTTTCGACCCAAG
GGCAGACGCCATGTCGCCGAGCGATCGCCGCGATATGCCTCGAATTTGCGCCATTCGGCATCCAGTTTCCAGTGCCCT
TCCCCGAATGACTGTCTCCACTATTCGGCAAGATTGTAAATCAAGCCTGAAGAAGCGGAGCATTCTTGGAAGTCGTAT
GTTCTACTGATTCTGTGCCTGGCGCAGACGGGTATATAATAAAGATCACGCACCGAGGAGTTCTTA

SEQ ID No. 46
GTTTCGACGTCATTGCCACG

10 SEQ ID No. 47
CCTTGATCGTTGCTGAGCG

15 SEQ ID No. 48
ATGACTGTCGCCGATATCG

SEQ ID No. 49
CTATACATCGAAAATAGACTGC

20 SEQ ID No. 50
CCGTCCTGGGCGGAGTATTGGCAGAG

SEQ ID No. 51
GCGAATCAGATTCTAGAGGAGCAGGATATCG

25 SEQ ID No. 52
GCTCAGCACCTCGGCGTCGAAATCTCC

30 SEQ ID No. 53
TCTGCCAATACTCCGCC

SEQ ID No. 54
CTTTCCGGCCGGCATG

35 SEQ ID No. 55
GGTATTGAGGGTCGCATGACTGTCGCCGATATCGA

SEQ ID No. 56
AGAGGAGAGTTAGAGCCTACATCGAAAATAGACTGCTTGTACACC

40 SEQ ID No. 57
GGTATTGAGGGTCGCATGTCGCAACCTGTTGTG

45 SEQ ID No. 58
AGAGGAGAGTTAGAGCCTATATCTTCTCGAGTTTCTTCC

SEQ ID No. 59
GGTATTGAGGGTCGCATGGGTTCGAACGCCTTC

50 SEQ ID No. 60
AGAGGAGAGTTAGAGCCTAAATGGCCCTGCCAAACTG

SEQ ID No. 61
GGTATTGAGGGTCGCATGGCTCTCCCTGACGTCGAAA

55 SEQ ID No. 62
AGAGGAGAGTTAGAGCCTACTCAAAGATGCTCTCC

60 SEQ ID No. 63
GGTATTGAGGGTCGCATGACAGTTCCATACCAAG

SEQ ID No. 64
AGAGGAGAGTTAGAGCCTAATTTACTTCTAATTTAGATGTTTC

5 SEQ ID No. 65
GGTATTGAGGGTCGCATGTCGGCAGAAAAGAAG

SEQ ID No. 66
AGAGGAGAGTTAGAGCCCAATCCTTGACCCCTTGCGCC

10 SEQ ID No. 67
CAGACCAATGGCCAGAAGA

SEQ ID No. 68
AGATGGGCGATGTGGTAGTC

15 SEQ ID No. 69
gccgcttacagggaaatgata

SEQ ID No. 70
atggctcaatctgcgagtct

20 SEQ ID No. 71
CGACTCTTGTGGGTGCTGTA

SEQ ID No. 72
GTGGAAAACACCCATTCTGG

25 SEQ ID No. 73
CCCCAATCGTCAGATGAAGT

30 SEQ ID No. 74
CTGGCCCACGATTCACTAAT

SEQ ID No. 75
caaaagatcgccatccaact

35 SEQ ID No. 76
Ctggtgacgagtcacctcaat

SEQ ID No. 77
ccagcagatgttcgaccccaag

40 SEQ ID No. 78
cagtgaactccatctcgtccatac

45 SEQ ID No. 79
TCCGTGGCGTCACCTTCC

SEQ ID No. 80
CAGATGGGCGATGTGGTAGTC

50 SEQ ID No 81

	tgcgcgcttt	cggtgatgac	ggtgaaaacc	tctgacacat	gcagctcccg	gagacggtca	60
	cagcttgtct	gtaagcggat	gccgggagca	gacaagcccg	tcagggcgcg	tcagcgggtg	120
55	ttggcgggtg	tcgggggtgg	cttaactatg	cggcatcaga	gcagattgta	ctgagagtgc	180
	accatatgcy	gtgtgaaata	ccgcacagat	gcgtaaggag	aaaataccgc	atcaggcgcc	240
	attcgccatt	caggctgcgc	aactgttggg	aaggcgatc	ggtgcgggcc	tcttcgctat	300
	tacgacagct	gtctcttata	cacatctcaa	ccatcatcga	tgaattttct	cgggtgttct	360
	cgcatattgg	ctcgaattcg	agctcggtag	ccggggatcc	tctagaagtc	ctgaatagta	420
60	gtttgtggat	taacattggt	ccgatgtagg	aatcatgatc	ccaaccagaa	gagctggaca	480

	gcccctcttc	cagagcattt	ttggtgggat	gttttggctt	agtgcgatgc	aactggacaa	540
	agtccttccg	tttctactgc	gtcttacatc	atctggtatc	tacgcaagcc	gcccacttac	600
	catatgaata	agaggcactc	aggttttccc	tcaccccccc	gaagcgatgg	taagcggggtg	660
	ccaaatgcat	cgggagtttc	tctatcataa	taacctaggt	attccgtaat	ctattaccag	720
5	tctttccgaa	gagctggtag	caactgcacg	agatttgtag	gagcgagtac	ccggtctggac	780
	gagcacgcag	cacggctatt	ggtcagcatg	gtagctaccg	aggggaggca	ggccgcccac	840
	atatcgtgag	tctcctgctt	tgcccgggtg	atgaaaccgg	aaaagctgct	atagagcttc	900
	tggggcggcg	atgtcgggaa	accagcagca	agctgaccca	gaaagaccgg	tcctcaagcc	960
	attaccgtac	taatcaatta	tttgtgtagc	aacactggga	agctgtagt	cataggctgg	1020
10	agcagctatt	tggccttttag	ccccgtctgt	ccgcccggtg	tgcgggtttcg	actggcgcg	1080
	aagctcaagg	tgatcagggtc	gttgcgtcag	tcggagacaa	caagccattg	ccttttctac	1140
	tgcccctccc	ccgctggtgg	cctttttctc	tcattcttctc	ctctcttccc	atcatcagca	1200
	tcattaatct	actgtctctc	tttctttcta	tcattctata	aagtaagaac	atatccatct	1260
	tcctcaatc	ccgtctacaa	tagtgtcctc	ttcactactc	tgtctctatc	tctcaaagct	1320
15	tgactgacat	ttaccccgc	cagtaccaga	cgaatctaca	cagaattcga	gctcactaaa	1380
	ccatggccaa	gttgaccagt	gccgttccgg	tgctcaccgc	gcgcgacgtc	gccggagcgg	1440
	tcgagttctg	gaccgaccgg	ctcgggttct	cccgggactt	cgtggaggac	gacttcgccg	1500
	gtgtgggtccg	ggacgacgtg	accctgttca	tcagcgcggt	ccaggaccag	gtggtgccgg	1560
	acaacaccct	ggcctgggtg	tgggtgcgcg	gcctggacga	gctgtacgcc	gagtggctgg	1620
20	aggctcgtgtc	cacgaacttc	cgggacgcct	ccgggccggc	catgaccgag	atcggcgagc	1680
	agcogtgggg	gcgggagttc	gccctgcgcg	accggccggg	caactgcgtg	cacttgcgtg	1740
	ccgaggagca	ggactgagaa	ttccactagt	gcagaaagct	gttttccttg	ctctgtggta	1800
	taagtctagt	gccactattc	tatgatgagt	tgatgactct	ttcatgactg	gaaggcttac	1860
	attctccaag	atcatgtctc	actcaaaact	tatctcgggt	tcactttcgg	gttccatata	1920
25	tctcatcatt	tctgggttta	gaaacatctc	tctcgttttt	gcagctcttc	tacgtactcc	1980
	tagcggtttc	actgaaatga	atacatttgg	gtaacctaat	tgccaattca	tatcttctg	2040
	agggcagtaa	cacatcacgt	acattctatc	agctgtgata	gagttacaaa	actagcaata	2100
	cttttatgct	tcctcctttc	ttaccattta	cacatccgct	ttctctctgc	tcttgatctt	2160
	ggcccctgat	tgtattgtca	cctcaccaaa	ttcaagtcac	cacctcttct	ctagagtcca	2220
30	cttttatgga	cagcaagcga	accggaattg	ccagctgggg	cgcctctctg	taaggttggg	2280
	aagccctgca	aagtaaaactg	gatggctttc	tcgccgccaa	ggatctgatg	gcgcaaggga	2340
	tcaagctctg	atcaagagac	aggatgagga	tcgtttcgca	tgattgaaca	agatggattg	2400
	cacgcagggt	ctccggccgc	ttgggtggag	aggctattcg	gctatgactg	ggcacaacag	2460
	acaatcggct	gctctgatgc	cgccgtgttc	cggctgtcag	cgcagggggc	cccggttctt	2520
35	tttgtcaaga	ccgacctgtc	cgggtgccctg	aatgaactgc	aagacgaggg	agcgcggcta	2580
	tctgtggctg	ccacgacggg	cgttccttgc	gcagctgtgc	tcgacgttgt	cactgaagcg	2640
	ggaagggact	ggctgctatt	gggcgaagtg	ccggggcagg	atctcctgtc	atctcacctt	2700
	gctcctgcgg	agaaagtatc	catcatggct	gatgcaatgc	ggcggctgca	tacgcttgat	2760
	ccggctacct	gcccattcga	ccaccaagcg	aaacatcgca	tcgagcgagc	acgtactcgg	2820
40	atggaagccg	gtcttgtcga	tcaggatgat	ctggacgaag	agcatcaggg	gctcgcgcca	2880
	gccgaactgt	tcgccaggct	caaggcgagc	atgcccgacg	gcgaggatct	cgtcgtgacc	2940
	catggcgatg	cctgcttgcc	gaatatcatg	gtggaaaatg	gccgcttttc	tggattcata	3000
	gactgtggcc	ggctgggtgt	ggcggaccgc	tatcaggaca	tagcgttggc	taccctgat	3060
	attgctgaag	agcttggcgg	cgaatgggct	gaccgcttcc	tcgtgcttta	cggtatcgcc	3120
45	gctoccgatt	cgcagcgcat	cgccttctat	cgccttcttg	acgagttctt	ctgaattatt	3180
	aacgcttaca	atttcctgat	gcggtatttt	ctgcgatgca	tcactagtga	attcggcgcc	3240
	gcctgcaggt	cgacctgcag	gcatgcaagc	ttgccaaacga	ctacgcacta	gccaaacaaga	3300
	gcttcagggt	tgagatgtgt	ataagagaca	gctgtcttaa	tgaatcgggc	aacgcgcggg	3360
	gagaggcggt	ttgcgtattg	ggcgctcttc	cgcttccctc	ctcactgact	cgctgcgctc	3420
50	ggctcgttcg	ctgcggcgag	cggatcagc	tcactcaaa	gcggtaatac	ggttatccac	3480
	agaatcaggg	gataacgcag	gaaagaacat	gtgagcaaaa	ggccagcaaa	aggccaggaa	3540
	ccgtaaaaag	gccgcgttgc	tggcggtttt	ccataggctc	cgccccctg	acgagcatca	3600
	caaaaatcga	cgctcaagtc	agaggtggcg	aaacccgaca	ggactataaa	gataaccaggc	3660
	gtttccccct	ggaagctccc	tcgtgcgctc	tcctgtttcc	accctgccgc	ttaccggata	3720
55	cctgtccgcc	tttctccctt	cgggaagcgt	ggcgctttct	catagctcac	gctgtaggta	3780
	tctcagttcg	gtgtagggtcg	ttcgtcccaa	gctgggctgt	gtgcacgaac	ccccggttca	3840
	gcccgaccgc	tgcgccttat	ccggtaaacta	tcgtcttgag	tccaacccgg	taagacacga	3900
	cttatcgcca	ctggcagcag	ccactggtaa	caggattagc	agagcgaggt	atgtaggcgg	3960
	tgctacagag	ttcttgaagt	ggtggcctaa	ctacggctac	actagaagga	cagtatttgg	4020
60	tatctgcgct	ctgctgaagc	cagttaccctt	cggaaaaaga	gttggttagct	cttgatccgg	4080

	caaacaaacc	accgctggta	gcggtggttt	ttttgtttgc	aagcagcaga	ttacgcgcag	4140
	aaaaaaagga	tctcaagaag	atcctttgat	cttttctacg	gggtctgacg	ctcagtgga	4200
	cgaaaactca	cgtaagggga	ttttggtcat	gagattatca	aaaaggatct	tcacctagat	4260
	ccttttaaat	taaaaatgaa	gttttaaatc	aatctaaagt	atatatgagt	aaacttggtc	4320
5	tgacagttac	caatgcttaa	tcagtgaggc	acctatctca	gcgatctgtc	tatttcgttc	4380
	atccatagtt	gcctgactcc	ccgtcggtga	gataactacg	atacgggagg	gcttaccatc	4440
	tggccccagt	gctgcaatga	taccgcgaga	cccacgctca	ccggctccag	atztatcagc	4500
	aataaaccag	ccagccggaa	gggcccagcg	cagaagtgg	cctgcaactt	tatccgcctc	4560
	catccagtct	attaattggt	gocgggaagc	tagagtaagt	agttcgccag	ttaatagttt	4620
10	gcgcaacggt	gttgccattg	ctacaggcat	cgtggtgtca	cgctcgctgt	ttggtatggc	4680
	ttcattcagc	tccggttccc	aacgatcaag	gcgagttaca	tgatccccca	tggtgtgcaa	4740
	aaaagcgggt	agctccttcg	gtcctccgat	cgttgtcaga	agtaagttgg	ccgcagtggt	4800
	atcactcatg	gttatggcag	cactgcataa	ttctcttact	gtcatgccat	ccgtaagatg	4860
	cttttctgtg	actggtgagt	aotcaaccaa	gtcattctga	gaatagtgtg	tgccggcgacc	4920
15	gagttgctct	tgcccggcgt	caatacggga	taataccgcg	ccacatagca	gaactttaaa	4980
	agtgtctatc	attggaaaac	gttcttcggg	gcgaaaaactc	tcaaggatct	taccgctggt	5040
	gagatccagt	tcgatgtaac	ccactcgtgc	acccaactga	tcttcagcat	cttttacttt	5100
	caccagcgtt	tctgggtgag	caaaaacagg	aaggcaaaat	gccgcaaaaa	aggggaataag	5160
	ggcgacacgg	aaatggtgaa	tactcatact	cttccttttt	caatattatt	gaagcattta	5220
20	tcaggggtat	tgtctcatga	gcggatacat	atttgaatgt	attagaaaa	ataaacaat	5280
	aggggttccg	cgcgaatttc	cccgaaaagt	gccacctgac	gtctaagaaa	ccattattat	5340
	catgacatta	acctataaaa	ataggcgtat	cacgaggccc	tttcgtc		5387

SEQ ID No. 82

25	ATGACAGTTCAATCACAGCAACAATCCCAGGCTATTCCCGTCTTTCTTCCCAGAATGGCACTGAACCCCAAGACGCA
	AACAAGGAGGTTGTTTCAAGATGTCGCTGCCAAAGGAGTGCAATACTTCAACCCTGAGCAACTTCTTGACCAGGTCTC
	GGTATAAACGGTCCCAATAATACTCTACCAAAGGCTTTTACACCCATCAAGATTCGCGGCATGACCATGCCCAACCGT
	ATCTGGGTGAGCCCCATGTGCCAATACAGTGCCCGTGACGGCTTTTACGAGCCTTGGCACTTTGCCCACTACGGCGGA
	CTGGCCCCAACGTGGCCCTGGCCCTCATCATGCTAGAAGCTACCGCAGTTCAAGCACGTGGCCGTATCACACCTGAAGAT
30	TCTGGCATCTGGCTAGACTCTCATGTTGAGGGACTGCGAAGCAGCTCGAGTTTGCCCATGCCAACAACCTCTCTTATC
	GGTATCCAGATTGGCCATGCTGGTTCGCAAGGCCCTCCTGCGTTGCTCCTTGGTTAGACGCCGGACTTGCCGCTGAAAAG
	GCCGCTGGTGGATGGCCCGATGACGTTGTTCGGACCTAGCAACGAGCCTTTTGCTCCTGGCTACCCCTACCCCGCTGCT
	ATTACTCTTGAAGAGATTGAACAGTTGAAGGAGGACTTTGTTTTCCGGTGTTCGTCGAGCGGTTGAAGCAGGATTTGAC
	ACTATCGACTTCCATTTCGCTCACGGTTATCTTGTTCAGCTTCTCTGCTCCCTGCCACCAACAAGCGTACCGACAAG
35	TACGGAGGTAGCTTCGAGAACAGAGTGCCCTTGTCTCGAGATTGTTCGAGGCTGCACGAGCTGTTATGCCTGAGGAC
	ATGCCCTTGTTCACCTCGCATCAGTGGAACCTGACTGGCTGGAGAACAACCCCTGAGTACGAGGGAGAGACCTGGACTCTT
	GAGCAGAGCATCAAGCTTGACACACAGTTAGCAGACCGTGGTGTTCGATGTTTTGGATGTTTCCAGTGGTGGCATCCAC
	AAGATGCAAAAGGTCGCTGCTGGTCCCGGTTACAGGCACCTCTTGCCAAGGCGATCAAGAAGTCAGTTGGAGACAG
	ATGTTGATCAGCACTGTTGGTAGCATCAAGATAGGTACCCTTGCGGAGGAGATCATCGCTGGAGGAGAGGACGATACC
40	CCCTTGGATCTTGTGGCTTCAGGCCGTCTGTTCCAGAAGAACAACCTGGACTTGTGTTGGTCATGGGCTGACGATCTGAAC
	ACTTCTATCCAGATCGCTCATCAGATCGCATGGGTTTCGGTGGCAGAGCTAAGAAGAACGCTCCCAAGCTTGTCTTA

SEQ ID No. 83

	FG00074.1 hypothetical protein 3813139459+
45	MTVQSQQSQAIPLVLSSQNGTEPQDANKEVVQNVAAKGVQYFNPQLPAPGLGNGPNNTLPKVFTPIKIRGMTMPNR
	IWVSPMCQYSARDGFQPPWHFAHYGGGLAQRGPGLIMLEATAVQARGRITPEDSGIWLDSHVEGLRKHVEFAHANNLI
	GIQIGHAGRKASCVPWLDAGLAAEKAAGGWPDVVGPSNEPFPAGPYTPRAITLEEIEQLKEDFVSGVRRRAVEAGFD
	TIDFHFHAGLYLVSSFLSPATNKRTDKYGGSFENRVRLALEIVEAARAVMPEDMPLFTRIISGTDWLENNPEYEGETWTL
50	EQSIKLAHLADRGVDVLDVSSGGIHKMQKVAAGPGYQAPLAKAIKKSVDGDKMLISTVGSIKIGTLAEIEIAGGEDDT
	PLDLVASGRFLFQKNTGLVWSWADDLNTSIQIAHQIAWFGGRAKKNPKLVL

SEQ ID No. 84

	ATGGACACGTCGATTCGTGTCTGGTCTCACACCGCCTCTCGTCGACTCGATCGATGCACCTCAAGATCAGCAACTTT
	GTCCCCACTCGAAGTGCCCAACCCCTCCTCCTGGCTCGGTCCCGGAATCCATCCTGCCAGAGGGTGTCAAAAACCGGCT
55	TTGTTCCAAACGTTGACATTGCCCTTTGCTGCACCGGAACAGGCGGGTAAGATGACCTTCAAGAACCGCATCATTTGTC
	TCTCCCATGTGCCAGTACTCTGCGAACAATGGTCTTCTACTCCGTACCACATGCGCATTTGGGATCGTTTGCCCTG
	CACGGTGTGGGAACCTCATGGTTCGAAGCATCTGGTGTGAGCCAGAGGGGAGGATCACGCCTCAGGACCTGGGTATT
	TGGTTCGAACAGCATCGGGATGCACACAAGGCGCTGGTGTTCGGTGTCTCAAGTCCTTCACGGATGGTCTGGGTGTAGGG
	CTGCAACTGGCGCATGCGGAAGGAAGGCCTCGGACTGGTACCTTTCTACCGCGGAGAAAAGAGCAAAAGTTTGTG
60	ACGAGGAGGAAGGTGGCTGGCCGGATCGTGTTCGTCGCTCCTTCGGCCATCGCATATGCGCAAGGTCACGTTACCCCT

CGAGCTCTCACGACCGAGGACATCAACAAGTTGCAAGACAAATTCGTTAGTCCGGCAGCATGGGCGTTTGAAGCTGGG
TATGACTACGTGGAACCTTACAGCGCTCACGGATACCTGATGCACTCGTTCCCTCAGCCGTTGACCAATCAGCGTACC
GACGAGTACGGCGGTAGCCTGGAGAACC GCGCTCGATTCTGCTCAACGTTGCCCGTCGAATCCGCCAAGAATTCCTCC
AACAAAGGGTCTCTGGGTGCGCGTCAGCTCCACCGACTGGGCGGACCAAGCGCACCAAGCCGACTCTTGGACCGTTGAC
CAGACGGTTGAACTCGCCAAGATGCTCCAAGAGGCTCGAGTCGACCTGCTAGACGTCAGCTCCGGCGGCGCTGGTTCCA
TTCCAAAAAATCACCGTGGGAGCCGGATACCAGCTATTTCGGAGCAAAAGCCGTTCCGGATGCTCTGGCCAAAATCGAA
CCCCAGCGTCCAAACGCATGCTCGTCCGGGCGCTGGGAATGATGGAAGGTTCTTACGATTCGCCCAACGGCCAAGAC
CGCAGCCAGATTGGCAAGTTGGCCGAGCAGTCGATTACAGAGCGGAGAGTGTGATGCGGTACTGTTGGCACGTGGATTG
ATGTCCTACCCAAGCTGGACCGAGGATGCTAGTGTAGCGCTGATGGGTACCAGGGCAGCTGGCAACCCGCACTACCAT
CGCGTTTACGTGGCTAAGAAGTGA

SEQ ID No. 85

MDTSRFVSGLTPLVDSIDALKISNFVPTSRGHPHPPGSVPESILPEGVKKPALFQTLTLFPAAPEQAGKMTFKNRIIV
SPMCQYSANGLPTFYHIAHLGSFALHGVGNMVEASGVEPEGRITPDGLGIWSEQHRDAHKALVSVLKSFTDGLGVG
LQLAHAGRKASDWSFPYRGEKKQKFVTQEEGGWPDVVAPSAIAYAQGHVTPRALTTEDINKLQDKFVQSARWAFEAG
YDYVELHSAHG YLMHSFSLPLTNQRTDEYGGSLNRRARFLLNVARRIRQEFPNKGLWVRVSSDWDADQAHQADSWTVD
QTVELAKMLQEARVDLLDVSSGGLVPFQKITVGAGYQLFGAKAVRDALAKIEPDASKRMLVGAVGMMEGSYDSPNGQD
RSQIGKLAEQSIQSGECDAVLLARGLMSYPSWTEASVALMGTRAAGNPQYHRVHVAKK

SEQ ID No. 86

MSALFEPYTLKDVTLRNRIAIPPMCQYMAEDGLINDWHQVHYASMARGGAGLLVVEATAVAPEGRITPGCAGIWSDAH
AQAFVFPVQAIIKAAGSVPGIQAIAHAGRKASANRPWEGDDHIGADDARGWETIAPSAIAFGAHLPNVPRAMTDDIARV
KQDFVDAARRARDAGFEWIELHFAGHYLGQSFFSEHSNKRTDAYGGSFDNRSRFLLETLAAVREVWPNLPLTARFGV
LEYDGRDEQTL EESIELARRFKAGGLDLSVSVGFTTIPETNIPWGPFAFMGPFAERVRREAKLPVTSAWGFGTFLALAEA
ALQANQLDLVSVGRAHLADPHWAYFAAKELGVEKASWTLPAFYAHWLER YR

SEQ ID No. 87

MSALFEPFRLRDTTIPNRIWMPPMCQYSAAPGPGSAGVPGDWHFAHYGARAVGGTGLIVVEATGVSPEGRISPQDLGL
WNDTQVEAFRRITGFLRSQGTVPVAVQLAHAGRKASTAQWRGGAPVGADAYGWQPLAPSALAFDERHPVPTLTVPQI
QEAVGRFADAARRALAAGFEIAEIHGAHGYLIEHFLSPHSNQRDAYGGSYANRTRFALEVVDVAVREVWPDCKPLFFR
VSATDWLEEGGWTPDDTVRFARDLEAHGIDLLDVSTGGNVPVRIRIPTGPGYQVPFAARVKAGSTLPVAAVGLITEPGQ
AEKILANGEADAVLLGRELLRNPSWAQHAARELGVDARMPDQYGWGM

SEQ ID No. 88

MTVSSAAAPQPASPAAPLLFTPLKLRSLLEPNRVVSPMCTYSATDGVANEFHLVHLGQYALGGAGLILAEATAVSPE
GRITPEDLGLWDDRQIVPLGHITDFVHQHGGHIGVQLAHAGRKASTYAPWRGKGAVPAELGGWQVIGPDENSFHDLP
TPAMMGADELRGVVDAFSAARRAQVAGFDAVEVHAAGHYLLHQFLSPLANTRTDDYGGSFENRTRLLEVVRAVRHV
WPAHLPLFVRLSATDWAEGGWDLQTVQLSKLLKYEVDVLDISSGGLTAAQQIEVGPYQVPFAAAVSRATEISVM
AVGLIETGAQAEAILQAGDADLIALGRPFRLRDPHWAQRAARELGRLRPVSIQYARAGW

SEQ ID No. 89

MRIVCIGGGPAGLYFAILMKKLNPAHEIRVIERNRPYDTFGWGVVFS DATMDNMREWDSETADAIQVAFNHWDIELH
FKGRTIRSGHGFVIGIRKMMLNILQARCEELGVELVFDREVESDAEFPDADLVIASDGINSRIRNKYAEVFKPDIVT
RPNRYIWLGTTKLFDAFTFFFEKTEHGWFAQHIYKFDDKTTTFIVECEPHVWKAHGLDTADQEQSIAFCEQLFGKHL
GHRMTNSRHLRGSAWLNFQRVKCEQWHYNGKSHVVLMDAVHTAHFAIGSGTKLALEDAIELTRLFRDEGDTREHI
PAVLERYQAARNIDVLRQLQNAAWNAMEWFEVCGARYCDTLEPEQFMYSMLTRSQRISHENLRRLRDAGWLEGYERWLAR
KAGMTVRDDET PPPPMFTPFKLRGLTLANRIVMSPMAMYS AEDGAPTDFHLVHFGSRALGGAGLLYTEMTCVSPDARI
TPGCAGMYKPEHVNAWKRIVDVHGNDAKIGMQLGHAGRKATKLAWEGIDEPLEAGAWELISASPLPYLPHSQVPR
AMTRDDMERVRNDFVRATRM AAEAGFDILELHCAHYLLSSFLSPLTNRRTDEFGDLENRRARFPLEVFKAMRAMWPT
NRPMSVRLSCHDWFP GGNTADDAVAIARLFKEAGADIIDCSSGQVWKGDPVYGRMYQTFPADRIRNEVGIPTLAVGA
ISEADHANSIIAAGRADLCAIARPHLADPAWTLHEAAKIGFGEVAVWPKQYRSARGQYETNLQRAAAVAGK

SEQ ID No. 90

MREEPSAQLFKPLKVGRCHLQHRMIMAPTTRFRADGQGVLPFVQYEQYGRASVPGTLLITEATDITPKAMGYKHVP
GIWSEPQREAWREIVSRVHKKCFIFCQLWATGRAADPDVLADMKDLISSAVPVEEKGPLPRALTEDEIQCIADFA
QAARNAINAGFDGVEIHGANGYLIDQFTQKSCNHRQDRWGGS IENRRARFAVEVTRAVIEAVGADRVGKLSYSPYLG
MGTMDELVPQFEYLIAQMRRLDVAYLHLANSRWLDEEKPHDPNHEVFVRVWGQSSPILLAGGYDAASAEKVTEQMAA
ATYTNVAIAFGRYFISTPDLPRVMAGIQLQKYDRASFYSTLSREGYLDYPFSAEYMALHNFPV

SEQ ID No. 91

MTIRKLDGEESMLFQPLEIANGRIRLSHRVVHAPMTRNRGVPLNPTSTPEQPNRIWYPGDLMVQYYRQRATPGGLIIS
EGVPPSLESNGMPGVPGLWTPAQAGWKRVVDVHEQGGYIYCQLWHAGRATIPQMTGSPAVSASATVWDSPTCEYSH
PPVGSTPEVRYADHPPIELTI PHLKQTI RDYCNAAKTAMEIGFDGVELHAGNGYLPEQFLSSNVNKRRTDEYGGSPKEK
5 CRFVLELMDLAATVGEDNLALRLSPFGLFNQARGEQVRVETWTFCLCESLKKAHPNLSYVSFIEPRYEQIFSYYEEDNF
LRWGLSDVDLSSFRKIFGTTPFFSAGGWDQSNWGVLEEGRYDALLYGRYFTSNPDLVERLRKGIPTFPYDRSRFYG
PFEDNAKCYVDYPPATASS

SEQ ID No. 92

MTVESTNSFVVPAGTKQIEIAPLGSTKLFQPIKVGKNIPLHRVAHAPTTRFRAAKNHTPSDLQLEYKTHSQYPGTLI
10 ITEATFTSEQGMDLHVPGIYNDAQTKAWKKINDEIHANGSFSSMQLWYLGRVANPKDLKDAGLPLIGPSAVYWDEES
EKLAKSVGNELRELTEKEIDHIVEVEYPNAAKRAIEAGFDYIEVHSAPGYFLDQFLNPASNKRRTDKYGGSIENRALL
LRIIDKLIGIVGAEKLAURLAPWSSFLGMEIEGEEIHSYILQQLQQRADNGQQLAYISLVEPRVTGIYDVSLKDQKGR
SNEFAYKYWKGNFVRAGNYTYDAPEFKTLLHDLNDRTIVGFARFFTSPNDLVEKLKLGKPLNHYDREEFYKYNYGY
15 NSYDESEKQVIGKPLV

SEQ ID No.

MTIESTNSFVVPSTDKLIDVTPLGSTKLFQPIKVGNNVLPQRIAYVPTTRFRASKDHIPSDLQLNYNARSQYPGTLI
ITEATFASERGGIDLHVPGIYNDAQAKSWKKINEAIHGNGSFSSVQLWYLGRVANAKDLKDSGLPLIAPSAYWDEES
20 EKLAKSAGNELRALTEEEIDHIVEVEYPNAAKHALEAGFDYVEIHGAHGYLLDQFLNLASNKRRTDKYGGSIENRALL
LLRVVDKLIIEVVGANRLALRLSPWASFQMEIEGEEIHSYILQQLQQRADNGQQLAYISLVEPRVTGIYDVSLKDQKGR
RSNEFAYKIWKGNFIRAGNYTYDAPEFKTLLINDLKNDRSIIGFSRFFTSPNDLVEKLKLGKPLNHYNREEFYKYNYGY
YNSYDESEKQVIGKPL

SEQ ID No. 94

MAATAAESRLFQPLKLT PKITLGHRLAMAPLTRFRSDDEHVPIVPLMTTYYSQRASVPGTLLVTEATFISPAAGGYDN
25 VPGIYNAAQIAAWKKITDAVHAKGSFIFCQLWSLGRAANPEVLAKEGGLKLSASSAVPMEEGAPVPEEMTVAEIKERV
AEYAAAAKNAVEAGFDGVEIHGANGYLIDQFLQDTCNQRTEYGGSIENRSRFAHEVVKAVVEAVGAETGIRLSPYS
TFQGMKMKDLIPQFEDVIRKINGFLAYLHLTQSRVAGNMVDVQPEEEDENLAFAAKLWDGPLLIAGGLTPETAKHLV
DREFPEKDVTATFGRHFISTPDLFPRIKEGIELNPYDRDTFYKAKSPDGYIDQPFSSKEFEKVYGAQA
30

SEQ ID No. 95

MSFVKDFKQALGDTNLFKPIKIGNNELLHRAVIPPLTRMRALHPGNI PNRDWAVEYYTQRAQRPGTMIITEGAFISP
QAGGYDNAPGVWSEEQMVETWKIFNAIHEKKS FVWVQLWVLGWAAFPDNLARDGLRYDSASDNVFMDAEQEAKAKKAN
35 NPQHSITKDEIKQYIKEYVQAAKNSIAAGADGVEIHSANGYLLNQFLDPHSNRTRTEYGGSIENRARFTLEVVDALVE
AIGHEKVGRLRLSPYGVFNMSGGAE TGIVAQYAYVAGELEKRAKAGKRLAFVHLVEPRVTNPFLTEGEGEYEGGSNDF
VYSIWKGPIIRAGNFALHPEVVREEVKDKRTLIGYGRFFISNPDLVDRLEKGLPLNKYDRDTFYQMSAHGYIDYPTYE
EALKLGWDKK

SEQ ID No. 96

MPFVKDFKQALGDTNLFKPIKIGNNELLHRAVIPPLTRMRALHPGNI PNRDWAVEYYAQRAPRGTLIITEGTFPSP
40 QSGGYDNAPGIWSEEQIKETWKIFKAIHENKSFAWVQLWVLGWAAFPDNLARDGLRYDSASDNVYMNAEQEEAKKAN
NPQHSITKDEIKQYVKEYVQAAKNSIAAGADGVEIHSANGYLLNQFLDPHSNRTRTEYGGSIENRARFTLEVVDALVE
AIGPEKVGRLRLSPYGVFNMSGGAE TGIVAQYAYVLGELEKRAKAGKRLAFVHLVEPRVTNPFLTEGEGEYEGGSNKF
45 AYSIWKGPIIRAGNFALHPEVVREEVKDPTLIGYGRFFISNPDLVDRLEKGLPLNKYDRDTFYKMSAEGYIDYPTYE
EALKLGWDKN

SEQ ID No. 97.

MPFVKGFEPISLRDTNLFEPKIGNTQLAHRVMPPLTRMRATHPGNIPNKEWAAVYQGQRAQRPGTMIITEGTFISP
50 QAGGYDNAPGIWSDQVAEWKNI FLAIHDCQSFAWVQLWSLGWAFPDNLARDGLRYDCASDRVYMNATLQEKAKKAN
NLEHSLTKDDIKQYIKDYIHAANKNSIAAGADGVEIHSANGYLLNQFLDPHSNKRRTDEYGGTIENRARFTLEVVDALIE
TIGPERVGLRLSPYGTFNMSGGAEPTIIAQYSYVLGELEKRAKAGKRLAFVHLVEPRVTNPFLTEGEGEYEGGSNDF
AYSIWKGPIIRAGNYALHPEVVREQVKDPTLIGYGRFFISNPDLVYRLEEGPLNKYDRSTFYTMSAEGYIDYPTYE
EAVDLGWKN

SEQ ID No. 98

GCTAGCATGACTGTCGCCGATATCGA

SEQ ID No. 99

GCTAGCCTATACATCGAAAATAGACTGC

SEQ ID No. 100
ACTAGTCCAGGGGACTGTCGTGGTCAA

5 SEQ ID No. 101
CAATTGCCCAGGCCTAATGCATGCTG